

# ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS

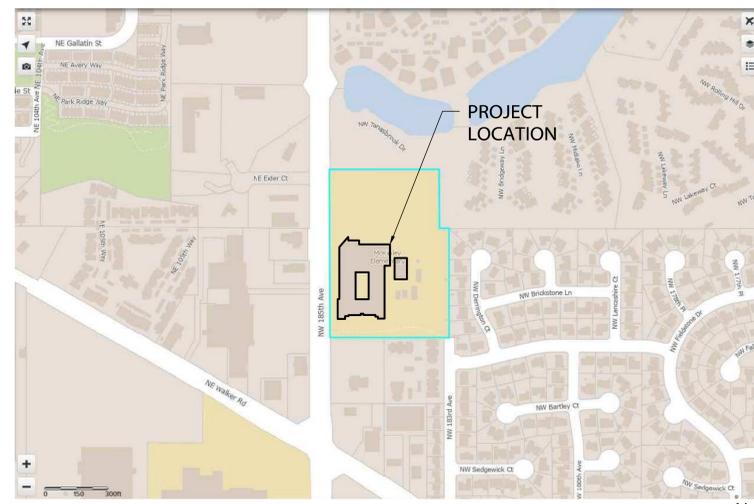
## BEAVERTON SCHOOL DISTRICT

### MCKINLEY ELEMENTARY SCHOOL

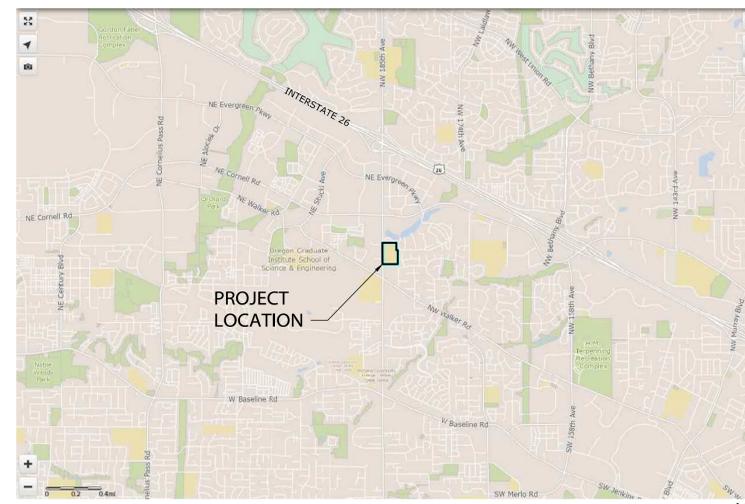
1500 NW 185TH AVE., BEAVERTON, OR 97006



REPRESENTATIONAL IMAGE. IMAGE SHOWN MAY NOT BE AN EXACT REPRESENTATION OF ACTUAL DESIGN AND CONSTRUCTION.



VICINITY MAP  
SCALE: NTS



PROJECT LOCATION MAP  
SCALE: NTS

#### PROJECT DESCRIPTION

ARCHITECTURAL SERVICES ASSOCIATED WITH GENERAL BUILDING CONSTRUCTION PROJECTS; RENOVATIONS AND REPAIRS AS ASSIGNED BY THE BEAVERTON SCHOOL DISTRICT IN RESPONSE TO THE VOTER APPROVED BOND MEASURE.

THE PROJECT CONSISTS OF THE ALTERATION OF A PORTION OF AN EXISTING BEAVERTON SCHOOL DISTRICT MCKINLEY ELEMENTARY SCHOOL. THE WORK WILL INCLUDE THE FOLLOWING: SEISMIC IMPROVEMENTS TO ADDRESS THE SEISMIC PERFORMANCE OF ROOF WITH A SEPARATE IMPROVEMENTS PACKAGE ADDRESSING BOTH THE PRIMARY STRUCTURAL SYSTEM AND NON-STRUCTURAL ELEMENTS SUCH AS WALLS AND CEILINGS. THERE WILL BE A COMPLETE RE-ROOF AND ROOF-LEVEL SEISMIC STRENGTHENING.

REMOVAL AND REPLACE THE EXISTING LOW-SLOPE BUILT UP ROOF ASSEMBLY PER ROOFING ASSESSMENT RECOMMENDATIONS WITH NEW BUILT UP ROOF ASSEMBLY WITH ADDED INSULATION, TO INCLUDE CLEANING OF ROOF AND OVERFLOW DRAIN BODIES, AS WELL AS CLEANING AND RESETTING OF ROOF DRAIN DOWNSPOUTS ASSEMBLIES. WORK INCLUDES NEW ASSOCIATED FLASHINGS, GUTTERS, DOWNSPOUTS, FASCIA'S, CURBS AND COUNTER-FLASHING FOR MECH. EQUIPMENT, NEW SKYLIGHTS, ROOF ACCESS LADDER, ROOF HATCH GUARDRAIL AND FALL RESTRAINT SYSTEM IDENTIFIED ON PLANS. CONTRACTOR TO REPLACE EXISTING ROOF SYSTEMS DAMAGED FROM WATER INTRUSION AS REQUIRED FOR NEW SCOPE OF WORK INCLUDING, BUT NOT LIMITED TO, SHEATHING, INSULATION, CURBS, BLOCKING, ROOF FLASHING, ETC.

#### PROJECT INFORMATION

ADDRESS: 1500 NW 185TH AVE.  
BEAVERTON, OR 97006

PROPERTY ID: W341960

STATE ID: 1N131BC - 07900

COUNTY: WASHINGTON

JURISDICTION: CITY OF BEAVERTON

FIRE DISTRICT: TUALATIN VALLEY FIRE & RESCUE

DESCRIPTION OF USE: ELEMENTARY SCHOOL

OCCUPANCY CLASSIFICATION: EDUCATION (E)

AREA (APPROX.): PROPERTY: 9.94 ACRES (PORTLAND MAPS)  
BUILDING: 61,265 S.F. (PORTLAND MAPS)

YEAR BUILT: 1956, 1962, 1964, 1970, 1974, 2008, 1992

CONSTRUCTION TYPE: VB

ROOF COVERING CLASSIFICATION: CIVB)

#### PROJECT TEAM

OWNER: BEAVERTON SCHOOL DISTRICT 48  
16550 SW MERLO ROAD  
BEAVERTON, OR 97003  
PHONE: (503) 356-4500

PROJECT MANAGER: BEAVERTON SCHOOL DISTRICT 48  
FACILITIES DEVELOPMENT  
16550 SW MERLO ROAD  
BEAVERTON, OR 97003  
PHONE: (503) 356-4500  
CONTACT: CHRISTOPHER HANSEN

ARCHITECT: AXIS DESIGN GROUP  
ARCHITECTURE & ENGINEERING, INC.  
11104 S.E. STARK STREET  
PORTLAND, OR 97216  
PHONE: (503) 284-0988  
CONTACT: STEVEN EGLESTON

ROOFING CONSULTANT: CERTA BUILDING SOLUTIONS, INC.  
1510 SE 44TH AVE, STE 102  
PORTLAND, OR 97215  
PHONE: (206) 941-6953  
CONTACT: DAN RUNDLE

STRUCTURAL ENGINEER: HOLMES  
555 SE MILK JR BOULEVARD, STE 602  
PORTLAND, OR 97214  
PHONE: (503)673-9323  
CONTACT: JENNIFER EGGERS

MEP ENGINEER: PAE ENGINEERS  
522 SW 5TH AVE, SUITE 1500  
PORTLAND, OREGON 97204  
PHONE: (503) 542-0540  
CONTACT: ROBERT SMITH

#### APPLICABLE CODES

WORK TO COMPLY WITH CURRENT FEDERAL, STATE, COUNTY, CITY BUILDING & ADA CODES & REGULATIONS.

#### OREGON BUILDING CODES:

- 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
- 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OESCC)
- 2019 OREGON FIRE CODE (OFC)
- 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC)
- 2021 OREGON PLUMBING SPECIALTY CODE (OPSC)
- 2021 OREGON ELECTRICAL SPECIALTY CODE (OESC)

#### SEPARATE PERMITS (DESIGN BUILD) ITEMS

FOR SEPARATE PERMITS PROCEDURE, SEE NO. 20 UNDER GENERAL NOTES ON SHEET G-001.

- ROOFTOP FALL PROTECTION SYSTEM: DESIGN OF FALL PROTECTION SYSTEM, INCLUDING ANALYSIS OF ALL COMPONENTS INCLUDING BUT NOT LIMITED TO BRACKETS, SUPPORTS AND ANCHORS.
- DESIGN OF SEISMIC COMPONENT OF STRUCTURAL SUPPORTS AND ANCHORS FOR:
  - EQUIPMENT, DUCTWORK, POWER & SIGNAL RACEWAYS & BOXES, LIGHTING, COMMUNICATION PATHWAYS AND OTHER ITEMS INDICATED ON THE DRAWINGS.
- SEISMIC CONTROLS: HVAC PIPING AND EQUIPMENT.
- SEISMIC CONTROLS: RACEWAYS AND ELECTRICAL EQUIPMENT

		ISSUED LOG			
		100% SD	100% DD	80% CD	100% CD
<b>SHEET INDEX</b>					
SHEET NO.	SHEET TITLE				
<b>GENERAL</b>					
G-000	SHEET INDEX, PROJECT DESCRIPTION AND PROJECT INFO.		X	X	X
G-001	GENERAL NOTES		X	X	X
<b>STRUCTURAL</b>					
S-001	GENERAL STRUCTURAL NOTES		X	X	X
S-002	GENERAL STRUCTURAL NOTES, CONTINUED		X	X	X
S-010	SPECIAL INSPECTIONS AND TESTING REQUIREMENTS		X	X	X
S-101	BUILDING YEAR PLAN		X	X	X
S-102	PERFORMANCE OBJECTIVE PLAN		X	X	X
S-161.1	ROOF FRAMING PLAN - SECTOR 1		X	X	X
S-161.2	ROOF FRAMING PLAN - SECTOR 2		X	X	X
S-161.3	ROOF FRAMING PLAN - SECTOR 3		X	X	X
S-161.4	ROOF FRAMING PLAN - SECTOR 4		X	X	X
S-801	WOOD FRAMING DETAILS		X	X	X
<b>ARCHITECTURAL</b>					
A-011	ABBREVIATIONS, SYMBOLS & MAT HATCHES		X	X	X
A-161	ROOF PLAN		X	X	X
A-161.1	ROOF PLAN - ASSEMBLY AREAS			X	X
A-221	EXTERIOR ELEVATIONS AND PARTIAL WALL SECTIONS		X	X	X
A-511	GENERAL ROOF ASSEMBLIES AND TYPICAL ROOF DETAILS		X	X	X
A-512	TYPICAL ROOF DETAILS			X	X
A-515	ENLARGED PLANS AND DETAILS				X
<b>MECHANICAL</b>					
M-001	SYMBOLS, LEGENDS AND ABBREVIATIONS - MECHANICAL				X
M-161	OVERALL ROOF PLAN - MECHANICAL		X	X	X
M-161.1	ENLARGED ROOF PLAN - SECTOR 1 - MECHANICAL			X	X
M-161.2	ENLARGED ROOF PLAN - SECTOR 2 - MECHANICAL			X	X
M-161.3	ENLARGED ROOF PLAN - SECTOR 3 - MECHANICAL			X	X
M-161.4	ENLARGED ROOF PLAN - SECTOR 4 - MECHANICAL				□
<b>ELECTRICAL</b>					
E-001	SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL				X
E-161	OVERALL ROOF PLAN - ELECTRICAL		X	X	X
E-161.1	ENLARGED ROOF PLAN - SECTOR 1 - ELECTRICAL			X	X
E-161.2	ENLARGED ROOF PLAN - SECTOR 2 - ELECTRICAL			X	X
E-161.3	ENLARGED ROOF PLAN - SECTOR 3 - ELECTRICAL			X	X
E-161.4	ENLARGED ROOF PLAN - SECTOR 4 - ELECTRICAL			X	X
LEGEND: x = ISSUED AS PART OF SET □ = NOT PART OF ISSUED SET + = ISSUED FOR INFORMATION ONLY □ = NO SCOPE OF WORK IN THIS AREA					



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ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
 BEAVERTON SCHOOL DISTRICT  
 MCKINLEY ELEMENTARY SCHOOL  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



REVISIONS		
No.	Description	Date

DRAWN BY: SEE  
 CHECKED BY: SEE  
 JOB NO: 22-002 BSD MCKES  
 DATE: 07/08/2022  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 SHEET INDEX  
 PROJECT DESCRIPTION AND  
 PROJECT INFORMATION

SHEET NO.  
**G-000**

## GENERAL NOTES

### 1. GENERAL

- A. DRAWINGS INDICATE THE GENERAL SCOPE OF THE PROJECT IN TERMS OF ARCHITECTURAL DESIGN CONCEPT, DIMENSIONS, AND MAJOR ELEMENTS OF STRUCTURAL SYSTEMS. AS SUCH, THE DRAWINGS DO NOT NECESSARILY INDICATE OR DESCRIBE ALL WORK REQUIRED FOR FULL PERFORMANCE AND COMPLETION OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ON THE BASIS OF GENERAL SCOPE INDICATED OR DESCRIBED, THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
- B. IN PERFORMING PROFESSIONAL SERVICES FOR THIS PROJECT, AXIS DESIGN GROUP ARCHITECTURE AND ENGINEERING INC. NEITHER ISSUES, EXPRESSES, OR IMPLIES ANY WARRANTIES OR CERTIFICATIONS EXCEPT AS REQUIRED FOR BY GOVERNING JURISDICTIONS.
- C. ALL WORK TO CONFORM WITH CONTRACT DOCUMENTS. NO CHANGES SHALL BE MADE WITHOUT REVIEW BY THE ARCHITECT. WHEN MORE INFORMATION OR AN INTERPRETATION OF THE CONTRACT DOCUMENTS IS NEEDED, THE CONTRACTOR WILL REFER THE MATTER TO THE ARCHITECT WHO WILL FURNISH INFORMATION OR INTERPRETATION IN THE FORM OF SUPPLEMENTAL INFORMATION OR OTHER WRITTEN FORM OR DRAWING.
- D. THE CONTRACTOR SHALL COORDINATE ALL TRADES RELATED TO HIS OR HER WORK.
- E. INFORMATION RELATING TO THE EXISTING BUILDING IS BASED ON LIMITED EXISTING BUILDING DOCUMENTS AND LIMITED FIELD MEASUREMENTS. ACTUAL CONDITIONS MAY VARY. CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD.
- F. SYSTEMS AND CONDITIONS HIDDEN FROM VIEW ARE BASED ON OWNER PROVIDED AS BUILT DOCUMENTS, HAVE NOT BEEN VERIFIED BY THE ARCHITECT, AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY. ALL SYSTEMS AND CONDITIONS TO BE VERIFIED BY THE GENERAL CONTRACTOR.
- G. ALL WORK SHALL BE PERFORMED WITH PROCEDURES SET FORTH BY PRODUCT MANUFACTURERS STANDARD SPECIFICATIONS OR STANDARD PRACTICE PUBLISHED BY TRADE ASSOCIATIONS. WHEN SEPARATELY BOUND SPECIFICATIONS ACCOMPANY THESE DRAWINGS THEY SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS.
- H. LARGE SCALE PLANS OR DETAILS TAKE PRECEDENCE OVER SMALL SCALE PLANS OR DETAILS.
- I. IF AN ITEM IS INDICATED ON THE DRAWINGS AS (NIC) IT IS "NOT IN THE CONTRACT". SUBSEQUENT DRAWINGS AND SPECIFICATIONS WILL BE SUBMITTED BY OTHERS FOR SEPARATE APPROVAL AND PERMITS.
- J. ANY DETAIL THAT APPLIES TO A SPECIFIC SITUATION SHALL APPLY TO ALL SIMILAR SITUATIONS UNLESS OTHERWISE NOTED.
- K. "TYP" OR "TYPICAL" AS USED IN THESE DOCUMENTS, SHALL MEAN THAT THE CONDITION IS THE SAME THROUGHOUT, UNLESS OTHERWISE NOTED.
- L. ANY SUBCONTRACTOR DESIGNED ITEMS TO BE SUBMITTED TO AND APPROVED BY THE OWNER AND ARCHITECT PRIOR TO CONSTRUCTION.
- M. SPOT ELEVATIONS ARE FROM FLOOR TO FINISH CEILING AND ARE ROUNDED TO NEAREST INCH (TYP).
- N. CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION EFFORTS WITH OWNER'S REQUIREMENTS.
- O. CONTRACTOR SHALL PROVIDE FOR DUST CONTROL THROUGHOUT. PROVIDE TEMPORARY MEASURES TO VENTILATE AREAS DURING ALL PHASES OF DEMOLITION AND CONSTRUCTION TO ERADICATE BUILDUP OF FUMES FROM FINISH MATERIALS AND CONSTRUCTION ACTIVITIES. CONTRACTOR TO MAINTAIN SIX (6) AIR EXCHANGES PER HOUR UNLESS MORE STRINGENT OSHA, STATE OR LOCAL STANDARDS ARE TO BE ADHERED TO.
- P. CONTRACTOR TO NOTIFY THE OWNER UPON DISCOVERY OF ASBESTOS OR ANY OTHER HAZARDOUS MATERIAL DURING THE COURSE OF WORK. ALL WORK SHALL STOP IMMEDIATELY IN AFFECTED AREA UNTIL THE CONDITION IS CORRECTED.
- Q. PROVIDE BLOCKING SECURED TO WALL FRAMING FOR ALL CASEWORK, RESTROOM ACCESSORIES, HANDRAIL BRACKETS AND ANY OTHER WALL-MOUNTED ACCESSORIES REQUIRING SUPPORT.

### 2. CODES

- A. ALL WORK TO COMPLY WITH THE LATEST EDITION OF ALL APPLICABLE CODES AS ADOPTED BY LOCAL AUTHORITY HAVING JURISDICTION FOR THIS PROJECT ARE AS FOLLOWS:
- 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
  - 2021 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC)
  - 2019 OREGON FIRE CODE (OFC)
  - ICC A171-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
  - NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
  - 2019 OREGON MECHANICAL SPECIALTY CODE (OMSC)
  - 2021 OREGON PLUMBING SPECIALTY CODE (OPSC)
  - 2021 OREGON ELECTRICAL SPECIALTY CODE (OESC)

### 3. PERMITS

- A. OTHER THAN THE BUILDING PERMIT, THE GENERAL CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, LICENSES, AND INSPECTIONS REQUIRED FOR THE COMPLETION OF THE WORK.

### 4. COORDINATION AND VERIFICATION

- A. ALL FIELD DIMENSIONS TAKE PRECEDENCE OVER DIMENSIONS ON DRAWINGS.
- B. THE DRAWINGS ARE DIVIDED INTO SEPARATE SHEETS FOR GENERAL CONVENIENCE ONLY. SHEET DESIGNATION OR NUMBERS ARE TO BE CONSIDERED AS LIMITATIONS OF AREAS OF WORK, RESPONSIBILITIES OR TRADES. COORDINATE THE WORK SHOWN IN THE DRAWINGS AND IN THE PROJECT MANUAL IN ORDER TO COMPLETE THE PROJECT AS DESIGNED.
- C. LOCATIONS AND SIZES OF EQUIPMENT ARE BASED ON AVAILABLE INFORMATION. PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES AND POSITIONS OF ALL EQUIPMENT, PADS, BASES, MOUNTINGS, ATTACHMENTS AND CONDUIT RELATING TO THE WORK.
- D. PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES AND POSITIONS OF OPENINGS IN SLABS AND WALLS NECESSARY FOR THE INSTALLATION OF THE WORK.
- E. POSITION ALL VALVES CONTROLS AND TERMINATIONS TO BE POSITIONED FOR SAFE, DIRECT AND EASY ACCESS. ALL PIPING AND DUCTWORK TO BE INSTALLED FOR CONVENIENT FUTURE ADDITIONS AND MODIFICATIONS. ITEMS TO BE LABELED PER OWNER REQUIREMENTS.
- F. QUANTITIES LISTED ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR TO VERIFY QUANTITIES AND INCLUDE ACCURATE QUANTITIES AS PART OF THE WORK.
- G. SPECIFIC NOTES OR KEYNOTES ON DETAILS APPLY TO SIMILAR CONDITIONS ON OTHER DETAILS ON ALL DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
- H. CONTRACTOR TO REVIEW ADDITIONAL GENERAL REQUIREMENTS IN SPECIFICATION.
- I. CONTRACTOR TO COORDINATE SCHEDULING OF ALL TENANT RELATED WORK OCCURRING IN ADJACENT SUITES WITH OWNERS REPRESENTATIVE, SECURITY OFFICE, AND ADJACENT TENANTS WELL IN ADVANCE OF ACTUAL WORK.
- J. CONTRACTOR TO COORDINATE WITH THE TENANT AND/OR VENDOR WHEN INSTALLING ITEMS SUPPLIED BY THAN THE CONTRACTOR.
- K. CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER AS REQUIRED TO IMPLEMENT SCOPE OF WORK, INCLUDING ANY OWNER PROVIDED CONTRACTORS.

### 5. UTILITIES AND DEMOLITION

- A. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITY LINES INCLUDING ELECTRICAL, SEWER, WATER, GAS, TELEPHONE, ETC. IN ADDITION THE CONTRACTOR SHALL CAUTION ALL SUBCONTRACTORS THAT THE SITE CONTAINS UNDERGROUND UTILITY LINES. THE DRAWINGS SHOW DIAGRAMMATICALLY THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES WHERE INFORMATION IS AVAILABLE, BUT THE DRAWINGS ARE NOT EXACT AS TO THE QUANTITY, EXTENT OR LOCATION.
- B. THE CONTRACTOR IS REQUIRED TO EXERCISE EXTREME CAUTION DURING ALL PHASES OF THE WORK TO LOCATE, IDENTIFY AND PROTECT EXISTING UTILITIES TO BE MODIFIED OR TO REMAIN. THE CONTRACTOR SHALL RECORD LOCATION OF, DISCONNECT, AND CAP AS NECESSARY, AND REPAIR DAMAGE TO EXISTING UTILITIES WHICH ARE ENCOUNTERED AS A RESULT OF WORK UNDER THIS CONTRACT.
- C. IF REQUIRED BY THE PROJECT, THE CONTRACTOR IS REQUIRED TO PROVIDE OUTSIDE GAS SHUT-OFF VALVE CONSPICUOUSLY MARKED PER OWNER REQUIREMENTS.
- D. CONTRACTOR TO COORDINATE ALL NEW SERVICE REQUIREMENTS WITH LOCAL UTILITY AGENCIES AND OWNER.
- E. THE CONTRACTOR TO ARRANGE AND PAY FOR TEMPORARY POWER, UTILITIES EXCEPT AS PREARRANGED WITH OWNER.
- F. IN PERFORMING PROFESSIONAL SERVICES FOR THIS PROJECT, CONTRACTOR SHALL PROVIDE SHORING, BRACING, SUPPORT, AND PROTECTION AS REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY OF THE PROJECT, ADJACENT PROPERTIES, AND PUBLIC SAFETY.

### 6. GENERAL DEMOLITION

- A. DEMOLISH AS REQUIRED TO ACCOMPLISH WORK INDICATED IN THESE DOCUMENTS. ALL REQUIRED DEMOLITION WORK SHALL BE INCLUDED IN THE BASE BID PACKAGE SUBMITTED BY THE CONTRACTOR.
- B. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE PUBLIC AND/OR WORKMEN ON THE SITE TO PREVENT ACCIDENTS OR INJURY TO ANY PERSON OR, ABOUT OR ADJACENT TO THE PREMISES. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, CODES AND REGULATIONS PERTAINING TO SAFETY AND THE PREVENTION OF ACCIDENTS.
- C. THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORT, INSULATION, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.
- D. INFORMATION RELATING TO THE EXISTING BUILDING IS BASED ON FIELD MEASUREMENTS. ACTUAL CONDITIONS MAY VARY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- E. VERIFY LIMITS OF DEMOLITION REQUIRED TO COMPLETE WORK PRIOR TO COMMENCEMENT. GRAPHIC REPRESENTATION OF AFFECTED AREAS ON DRAWINGS MAY BE SMALLER OR LARGER THAN INDICATED.
- F. IN THE EVENT OF DAMAGE TO EXISTING CONSTRUCTION, CONTRACTOR SHALL REPAIR AND RESTORE THE DAMAGE TO ITS ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- G. ONLY MAJOR ITEMS OF DEMOLITION ARE SHOWN. REMOVE MISCELLANEOUS MINOR ITEMS AS APPROPRIATE FOR PROPER COMPLETION OF THE WORK.
- H. THE DEMOLITION NOTES IN THE DRAWINGS REQUIRE THE REMOVAL OF A BUILDING ELEMENT OR SYSTEM OR A COMPLETE COMPONENT COMPRISED OF MULTIPLE ELEMENTS. THE CONTRACTOR SHALL DISASSEMBLE AND REMOVE FORM THE SITE EACH ITEM IN ITS ENTIRETY AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THE NEW WORK TO FOLLOW.
- I. REMOVE ALL MISCELLANEOUS TRIM, CASEWORK, EQUIPMENT, CONDUIT, BASES, AND OTHER SURFACE MOUNTED ITEMS WHETHER SHOWN OR NOT ON PARTITIONS TO BE DEMOLISHED.
- J. REMOVE ALL MISCELLANEOUS PIPE AND DUCT SUPPORTS, PARTITION TRACKS AND CLIPS NO LONGER FUNCTIONAL IN EXISTING CEILING CAVITIES OF ROOMS TO BE DEMOLISHED.
- K. CUT AND PATCH WALL, CEILING AND FLOOR ASSEMBLIES AND REPAIR FINISHES AS NECESSARY AT MECH., PLUMB., AND ELECT. DEMOLITION LOCATIONS; SEE MECH., PLUMB., AND ELECT. DEMOLITION PLANS FOR ADDITIONAL INFORMATION.
- L. THE CONTRACTOR SHALL PATCH AND REPAIR ELEMENTS WHERE ITEMS WERE REMOVED AND IN AREAS DAMAGED DURING DEMOLITION.
- M. THE CONTRACTOR SHALL CLEAN, PLUG, PATCH AND REPAIR ALL MATERIALS AND SURFACES AND PREPARE THEM FOR NEW WORK.
- N. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR LOCATING, IDENTIFYING, OR SPECIFYING MEANS OF REMOVAL OF ANY HAZARDOUS MATERIALS. HAZARDOUS MATERIAL TESTING BY OWNER CONTRACTED CONSULTANT.

### 7. DISCREPANCIES

- A. VERIFY ALL DIMENSIONS, ELEVATIONS, AND ALL EXISTING CONDITIONS AT THE SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES TO THE ARCHITECT AND THE OWNER.
- B. IF ANY ERRORS, INCONSISTENCIES, OR OMISSIONS IN THE CONTRACT DOCUMENTS ARE RECOGNIZED BY THE CONTRACTOR OR ANY MEMBER OF HIS ORGANIZATION, THE CONTRACTOR IS REQUIRED TO NOTIFY THE ARCHITECT IN WRITING OF SUCH ERROR, INCONSISTENCY OR OMISSION BEFORE PROCEEDING WITH THE WORK.
- C. SHOULD THE SPECIFICATIONS FAIL TO DESCRIBE THE MATERIAL OR KIND OF GOODS TO BE USED, SUBMIT AN INQUIRY TO THE ARCHITECT FOR CLARIFICATION.
- D. ALL WORK TO CONFORM TO THE CONTRACT DOCUMENTS. NO SUBSTITUTIONS PERMITTED WITHOUT REVIEW AND APPROVAL BY THE ARCHITECT AND OWNER.
- E. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND THE PROJECT MANUAL, THE LOCAL AUTHORITY IS TO PRICE THE MORE EXPENSIVE OR MORE ELABORATE METHOD, MATERIALS, AND EQUIPMENT DESCRIBED OR SHOWN, SHOULD THE OWNER, AT THE OWNER'S DISCRETION, APPROVE TO UTILIZE THE LESS EXPENSIVE, OR LESS ELABORATE METHOD, MATERIALS, OR EQUIPMENT, AN APPROPRIATE CREDIT NEGOTIATED BETWEEN THE CONTRACTOR AND OWNER SHALL BE DUE TO THE OWNER.
- F. THE CONTRACTOR SHALL CAREFULLY STUDY AND COMPARE THE INDIVIDUAL CONTRACT DOCUMENTS AND REPORT AT ONCE IN WRITING TO THE ARCHITECT ANY DEFICIENCIES PRIOR TO BIDDING. THE CONTRACTOR SHALL REQUIRE EACH SUBCONTRACTOR TO LIKEWISE STUDY THE DOCUMENTS AND IMMEDIATELY REPORT ANY DEFICIENCIES.

### 8. MODIFICATIONS

- A. MODIFICATIONS TO DETAILS MAY BE REQUIRED TO SUIT THE JOB DIMENSIONS OR CONDITIONS AND WILL BE MADE PART OF THE WORK.

### 9. ACCESS PANELS

- A. AT ALL WALL AND CEILING LOCATIONS PROVIDE ACCESS PANELS FOR ELECTRICAL, PLUMBING AND AIR CONDITIONING CONTROLS, VALVES, DAMPERS, COUNTER FIVE SHUTTERS OR OTHER DEVICES AS REQUIRED BY THE WORK AND APPLICABLE EVEN IF ACCESS PANEL IS NOT SHOWN ON CONTRACT DOCUMENTS. AT NON-ACCESSIBLE CEILINGS, ACCESS PANELS SHALL BE 24"X24" FLUSH MOUNTED AND FIT WITHIN THE CEILING PATTERN. SUBMIT SHOP DRAWINGS INDICATING THE EXACT LOCATIONS OF ALL ACCESS PANELS. NO INSTALLATION OF ACCESS PANELS TO BE MADE UNTIL THE ARCHITECT HAS APPROVED THE LOCATIONS. ACCESS PANELS TO BE LABELED AS REQUIRED BY OWNER.

### 10. EXITS

- A. EVERY EXIT DOOR TO BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

### 11. PENETRATION OF RATED ASSEMBLIES

- A. MECHANICAL DUCTS, ETC. PENETRATING FIRE-RATED CEILINGS AND FIRE WALLS TO BE CORRESPONDINGLY RATED OR DAMPERED, CABINETS, ELECTRICAL PANELS, LIGHTS, ETC. RECESSED INTO FIRE-RATED WALLS OR CEILINGS TO BE BACKED WITH CORRESPONDING FIRE-RESISTIVE CONSTRUCTION AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE FIRE PROTECTION.
- B. FIRE RESISTIVE ASSEMBLIES FOR PROTECTION OF OPENINGS TO COMPLY WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- C. PENETRATION OF FIRE-RATED ASSEMBLIES WHICH REQUIRE OPENING PROTECTION TO BE FIRE STOPPED, FIRE RATING FOR FIRE STOP SYSTEMS TO BE EQUAL TO THE ASSEMBLY PENETRATED.

### 12. DISSIMILAR METALS

- A. ALL DISSIMILAR METALS TO BE EFFECTIVELY ISOLATED FROM EACH OTHER WITH NEOPRENE ISOLATOR OR SIMILAR MATERIAL TO PREVENT MOLECULAR BREAKDOWN.

### 13. ELECTRICAL BACKBOARDS

- A. REFER TO ELECTRICAL, TELEPHONE/DATA AND SECURITY ELECTRONICS DRAWINGS FOR LOCATION OF AND SPECIFICATIONS FOR THE INSTALLATION OF FIRE RETARDANT TREATED PLYWOOD BACKBOARDS REQUIRED IN ELECTRICAL AND COMMUNICATION ROOMS. THESE REQUIRED PLYWOOD BACKBOARDS HAVE NOT BEEN SHOWN ON THE ARCHITECTURAL DRAWINGS, BUT MUST BE FURNISHED AND INSTALLED AS A PART OF THE OVERALL CONTRACT. BACKBOARDS TO BE PAINTED TO MATCH THE SURFACE UPON WHICH THEY ARE MOUNTED. ALL REQUIRED BLOCKING IN WALLS TO ACCEPT PLYWOOD SHOULD BE VERIFIED AND APPROVED WITH THE ELECTRICAL TEAM REPRESENTATIVE. COORDINATE LOCATIONS WITH OWNER PRIOR TO INSTALLATION.

### 14. SIGNAGE

- A. FURNISH AND INSTALL SUPPORTS AND OTHER NECESSARY FINISH MATERIALS FOR A COMPLETE CODE REQUIRED SIGNAGE INSTALLATION. REMOVE AND REINSTALL EXISTING SIGNAGE.

### 15. COORDINATION OF DEVICES

- A. EXACT LOCATIONS AND HEIGHTS OF ELECTRICAL, LOW VOLTAGE, MECHANICAL AND PLUMBING DEVICES, INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, PULL STATIONS, SWITCHES, OUTLETS, PHONE JACKS, AND THERMOSTATS, TO BE COORDINATED BY THE CONTRACTOR FOR ALIGNMENT, COORDINATION WITH EACH OTHER AND OTHER BUILDING FEATURES PRIOR TO INSTALLATION AS APPROVED BY ARCHITECT AND OWNER.

### 16. FIRE ALARM COORDINATION

- A. FIRE DETECTION ENGINEERING SERVICES, DOCUMENTS, AND PERMIT ACQUISITION TO BE PROVIDED ON A DESIGN-BUILD BASIS WITH THE SELECTED FIRE SYSTEM SUBCONTRACTOR PROVIDING THE REQUIRED DESIGN WORK AND INSTALLATION BASED ON DIAGRAMS AND PERFORMANCE SPECIFICATIONS PROVIDED BY OWNER AND EXISTING CONDITIONS.
- B. CONTRACTOR TO VERIFY ALL UTILITIES AND COORDINATE EQUIPMENT AND UTILITY REQUIREMENTS AND LOCATIONS WITH FIRE SYSTEM ENGINEER PRIOR TO PROCEEDING AND REVIEW WITH ARCHITECT PRIOR TO FINAL ROUGH-IN.

### 17. ELECTRICAL COORDINATION

- A. ELECTRICAL CONTRACTOR TO EXAMINE EXISTING CONDITIONS, VERIFY ALL UTILITIES, AND COORDINATE POWER REQUIREMENTS WITH BUILDING OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING. REVIEW AND VERIFY LIGHTING, CONTROLS, OUTLETS, AND OWNER EQUIPMENT POWER LOCATIONS WITH THE ARCHITECT PRIOR TO APPROVAL AND FINAL ROUGH-IN.
- B. ALL LIGHT FIXTURES SHALL MEET CURRENT CODES AND BE PRE-APPROVED BY THE ARCHITECT AND OWNER.
- C. PROPOSALS AND DOCUMENTS PERTAINING TO THIS WORK TO BE PROVIDED TO THE ARCHITECT FOR REVIEW PRIOR TO PROCEEDING. ALL ELECTRICAL AND FIRE ALARM FIXTURES, COMPONENTS, AND ANY OTHER EXPOSED EQUIPMENT, ALONG WITH THEIR LOCATIONS TO BE SUBMITTED FOR REVIEW.
- D. ELECTRICAL AND COMMUNICATIONS SYSTEM RECEPTACLES TO BE MOUNTED AT 15" A.F.F. UNLESS OTHERWISE NOTED.
- E. ELECTRICAL OUTLETS AT OPPOSITE SIDES OF FIRE RATED AND/OR ACOUSTICALLY RATED WALLS ARE TO BE SEPARATED BY A MINIMUM OF 24" MINIMUM HORIZONTAL SPACING AND SEPARATE STUD SPACES OR AS INDICATED IN THE DRAWINGS.

### 18. MECHANICAL COORDINATION

- A. CONTRACTOR TO VERIFY ALL UTILITIES AND COORDINATE EQUIPMENT POWER REQUIREMENTS AND LOCATIONS WITH MECHANICAL SPECIFICATIONS AND MECHANICAL ENGINEER PRIOR TO PROCEEDING AND REVIEW WITH ARCHITECT PRIOR TO FINAL ROUGH-IN.

### 19. PROJECT CLOSEOUT

- A. CONTRACTOR TO WARRANTEE ALL PARTS, LABOR, EQUIPMENT, AND MATERIAL PROVIDED UNDER THIS CONTRACT, UNLESS OTHERWISE NOTED, FOR A PERIOD OF (1) YEAR, UPON COMPLETION OF CONTRACT.
- B. WHEN REQUESTING THE ARCHITECT'S INSPECTION FOR SUBSTANTIAL COMPLETION:
- KNOW EXEMPTIONS MUST BE LISTED IN THE REQUEST.
  - ALL WARRANTIES AND CERTIFICATES MUST BE SUBMITTED TO THE ARCHITECT.
  - THE CONTRACTOR'S PUNCH LIST MUST BE SUBMITTED WITH THE REQUEST.
- C. THE ARCHITECT WILL VERIFY THE CONTRACTOR'S PUNCH LIST AND INDICATE ADDITIONAL PUNCH LIST ITEMS AS NEEDED. RESULTS OF THE ARCHITECT COMPLETED INSPECTION WILL FORM THE "PUNCH LIST" FOR FINAL ACCEPTANCE. ONE RE-INSPECTION WILL BE PERFORMED BY THE ARCHITECT TO ESTABLISH CERTIFICATION OF FINAL ACCEPTANCE; FURTHER RE-INSPECTIONS BY THE ARCHITECT TO BE AT THE CONTRACTOR'S EXPENSE.
- D. ALL MAINTENANCE AND OPERATIONS MANUALS FOR ALL EQUIPMENT AND MATERIALS PROVIDED TO BE ORGANIZED AND PREPARED AS INDICATED IN THE PROJECT MANUAL.

### 20. SEPARATE PERMIT (DESIGN BUILD) ITEMS

- A. THIS PROJECT WILL HAVE THE FOLLOWING SEPARATE PERMIT ITEMS WHICH MAY UTILIZE A DESIGN/BUILD APPROACH. THE INFORMATION CONTAINED IN THESE DOCUMENTS ARE PRELIMINARY, PROVIDING A BASIS FOR BIDDING AND PLANNING. ACTUAL ENGINEERING AND INSTALLATION DRAWINGS ARE TO BE PROVIDED UNDER A SEPARATE PERMIT AND REQUIRE THE WILL APPROVAL OF BOTH THE ARCHITECT/ THE ENGINEERS AND THE AUTHORITY HAVING JURISDICTION.
- SEE G-000 FOR LIST OF SEPARATE PERMIT ITEMS.
- B. THE PROCEDURE FOR "SEPARATE PERMIT APPROVAL DOCUMENTS" TO BE AS FOLLOWS:
- THE DESIGN/BUILD CONTRACTOR TO PROVIDE (4) SETS OF (PDF) SUBMITTAL DOCUMENTS TO THE ARCHITECT FOR INITIAL REVIEW AND COORDINATION WITH THE DESIGN INTENT OF THE PROJECT.
  - IF THE SUBMITTAL DOCUMENTS ARE FOUND TO BE ACCEPTABLE THE ARCHITECT WILL ADD A NOTATION INDICATING THAT THE SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING.
  - FOLLOWING THE ARCHITECT'S APPROVAL, THE DESIGN/BUILD CONTRACTOR IS RESPONSIBLE FOR SUBMITTING, TRACKING, AND OBTAINING APPROVAL FROM THE AUTHORITY HAVING JURISDICTION.
  - UPON APPROVAL BY THE AUTHORITY HAVING JURISDICTION, THE DESIGN/BUILD CONTRACTOR IS REQUIRED TO PROVIDE A COPY OF THE DRAWINGS TO THE ARCHITECT AND OWNER FOR REFERENCE.



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ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
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REVISIONS		
No.	Description	Date

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SHEET TITLE  
GENERAL NOTES

SHEET NO.

G-001

GENERAL STRUCTURAL NOTES

THE FOLLOWING IS INTENDED AS A SUMMARY SPECIFICATION. REFER TO THE PROJECT SPECIFICATION FOR FULL DETAILS. NOTIFY THE ARCHITECT WHERE THERE IS A CONFLICT BETWEEN THE PROJECT SPECIFICATION AND THE STRUCTURAL GENERAL NOTES.

SCOPE OF WORK: THIS PROJECT INVOLVES A VOLUNTARY STRENGTHENING OF BUILDING SYSTEM. SEISMIC STRENGTHENING IS IN ACCORDANCE WITH ASCE 41-17 BPOE (RC-III) AND IV: BSE-1E & BSE-2E, USING 75% CAP FROM BSE-1N AND BSE-2N PER SEISMIC REHABILITATION GRANT PROGRAM REQUIREMENTS). THE CURRENT SCOPE ADDRESSES ROOF-LEVEL SEISMIC DEFICIENCIES AND IS NOT INTENDED TO BE A FULL SEISMIC UPGRADE OF THE BUILDING.

GOVERNING CODE:

THE STRUCTURAL DESIGN OF BUILDING COMPONENTS DESCRIBED ON THESE DRAWINGS IS IN ACCORDANCE WITH ASCE 41-17 AS NOTED ABOVE AND PER THE 2019 OREGON STRUCTURAL SPECIALTY CODE (OSSC) REQUIREMENTS.

LIMITATIONS:

THE LATERAL FORCE RESISTING SYSTEM SHOWN ON THESE DRAWINGS IS DESIGNED TO ACHIEVE MINIMUM REQUIRED STANDARDS FOR STRUCTURAL SEISMIC RESISTANCE, AND IS INTENDED TO REDUCE THE RISK OF LIFE LOSS OR INJURY. THIS WORK WILL NOT NECESSARILY PREVENT LOSS OF LIFE OR INJURY, NOR PREVENT EARTHQUAKE DAMAGE TO NEW OR REHABILITATED BUILDINGS.

1. GENERAL

MATERIALS AND WORKMANSHIP TO CONFORM TO THE BUILDING CODE DEFINED ABOVE AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

A. THESE NOTES APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED. WHENEVER THERE APPEARS TO BE A CONFLICT BETWEEN THE NOTES, DRAWINGS, OR SPECIFICATIONS, CONTACT THE ENGINEER FOR CLARIFICATION.

B. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND PROPOSED DIMENSIONS AT JOB SITE. COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS BEFORE COMMENCING WORK. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES IN A REASONABLE AND TIMELY MANNER. DO NOT PROCEED WITH AFFECTED WORK UNTIL DISCREPANCIES ARE RESOLVED. DO NOT SCALE DRAWINGS.

C. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

D. DETAILS NOTED AS "TYPICAL" IN THEIR TITLE OR ON SHEETS TITLED "TYPICAL DETAILS" APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. SUCH DETAILS ARE NOT NOTED AT EACH LOCATION THAT THEY OCCUR.

E. ALL ELEMENTS INDICATED ON THE DRAWINGS SHALL BE ASSUMED "NEW" UNLESS OTHERWISE NOTED.

F. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE AT ALL TIMES FOR THE CONDITIONS OF THE JOB SITE, INCLUDING, BUT NOT LIMITED TO: a) SAFETY OF PERSONS, PROPERTY AND STRUCTURES. b) MEANS, METHODS, PROCEDURES, TECHNIQUES OR SEQUENCES OF CONSTRUCTION. c) COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND GUIDELINES. d) ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS.

THE CONTRACTOR SHALL BRACE OR SHORE THE CONSTRUCTION AS REQUIRED TO PROVIDE A SAFE AND TRUE STRUCTURE. WHERE BRACING OR SHORING IS INDICATED IN THE DRAWINGS, IT IS DONE SO ONLY AS A COURTESY TO THE CONTRACTOR AND SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COORDINATE THE WORK WITH THE AFOREMENTIONED PROVISIONS. THE ARCHITECT'S OR ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.

2. SUBMITTALS

A. SUBMIT (1) HARD COPY OR ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF) COPY OF REVISIONS TO OWNER'S REPRESENTATIVE FOR REVIEW. SUBMIT IN ACCORDANCE WITH DIVISION 1 OF THE SPECIFICATIONS. MULTIPLE COPIES OF THE SAME SUBMITTAL WILL NOT BE RETURNED. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR MAKING ANY ADDITIONAL COPIES OF REVIEWED SUBMITTALS, AS MAY BE REQUIRED. THE ENGINEER SHALL HAVE 15 WORKING DAYS FROM DATE OF RECEIPT TO COMPLETE AND RETURN THE SUBMITTAL REVIEW.

B. SUBSTITUTION REQUESTS SHALL DEMONSTRATE THE REQUESTED SUBSTITUTION'S ABILITY TO MEET OR EXCEED THE REQUIREMENTS OF THE ORIGINALLY SPECIFIED ITEM. THE REQUEST SHALL ALSO INCLUDE A ROUGH COST SAVINGS ESTIMATE TO THE OWNER, REFERENCES TO DETAILS WHERE SUBSTITUTION IS PROPOSED TO BE APPLIED, AND ALL SUPPORTING DOCUMENTATION REQUIRED FOR THE ITEM BY THIS SECTION OF THE NOTES.

C. SHOP DRAWINGS, MILL CERTIFICATES, AND/OR OTHER RELEVANT CERTIFICATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BEFORE FABRICATION. FOR THE ITEMS LISTED BELOW, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SHOP DRAWINGS WITH ALL TRADES AND FIELD CONDITIONS.

NOTE: SUBMITTING COPIES OF THE STRUCTURAL DRAWINGS IS UNACCEPTABLE AND WILL BE REJECTED FOR COMPLETE REVISION. WHERE NEW STRUCTURAL ELEMENTS ARE LOCATED WITHIN AN EXISTING STRUCTURE, SHOP DRAWINGS SHALL INCLUDE THE COORDINATION OF THE NEW STRUCTURAL ELEMENTS WITH THE EXISTING STRUCTURAL AND ARCHITECTURAL ELEMENTS. ALL SHOP DRAWING SUBMITTALS SHALL CLEARLY IDENTIFY THE SET-OUT OF NEW STRUCTURAL ELEMENTS RELATIVE TO THE RELEVANT PORTIONS OF THE EXISTING STRUCTURE, EXTENT OF ANY REQUIRED DEMOLITION, AND SHALL COORDINATE ALL OF THE RELEVANT TRADES.

1) STRUCTURAL AND MISCELLANEOUS STEEL
a. MILL CERTIFICATIONS FOR ALL STEEL AND ALL FASTENERS.
b. SHOP DRAWINGS INCLUDING AT A MINIMUM ASTM MATERIAL DESIGNATIONS, MEMBER SIZES, SIZES AND TYPES OF WELDS, SIZES AND TYPES OF BOLTS, AND DIMENSIONS.
c. WELD PROCEDURES SPECIFICATIONS FOR EACH TYPE OF WELD TO BE USED AND PRODUCT DATA FOR WELDING FILLER METAL.
d. MANUFACTURER'S PRODUCT DATA FOR PRIMER AND FINISH PAINT, INCLUDING COLOR CHARTS.
e. CONTRACTOR SHALL ESTABLISH AND VERIFY REQUIRED TOP OF STEEL (T.O.S.) ELEVATIONS, WHETHER INDICATED ON THE DRAWINGS OR NOT, AGAINST ARCHITECTURAL FINISHED FLOOR AND ROOF ELEVATIONS, AND THE STRUCTURAL DETAILS, INCLUDING ANY SPECIFIED OFFSET OR PRE-CAMBER. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

2) REINFORCING STEEL
a. MATERIAL CERTIFICATES FOR REINFORCING STEEL.
b. DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF REINFORCING STEEL IN ACCORDANCE WITH ACI 315.

3) CAST-IN-PLACE CONCRETE AND SHOTCRETE
a. MIX DESIGNS FOR EACH TYPE OF CONCRETE ON THE PROJECT INCLUDING RESULTS OF SLUMP, COMPRESSION, AND SHRINKAGE TESTS AND OTHER PROJECT SPECIFIC CRITERIA
b. MATERIAL CERTIFICATES
c. PROPOSED CONSTRUCTION AND CONTROL JOINT LOCATIONS
d. CURING MATERIALS AND METHODS
e. PRODUCT DATA FOR NON-SHRINK GROUT
f. FORMWORK TYPE, FORMWORK, JOINT LOCATIONS, CHAIRS, FORM TIES, ETC.
g. PROPOSED ROUGHENING METHODS AND TECHNIQUES TO PREPARE EXISTING SURFACES TO RECEIVE NEW CONCRETE, IN ACCORDANCE WITH AMPLITUDE NOTED IN THE CONCRETE SECTION OF THESE NOTES.

4) MECHANICAL ANCHORS AND EPOXY ANCHORS
a. PRODUCT DATA FOR EACH TYPE OF SYSTEM INCLUDING ANCHOR TESTING IN ACCORDANCE WITH ACI 355.2 FOR MECHANICAL ANCHORS AND ACI 355.4 FOR EPOXY ANCHORS.
b. CERTIFICATION OF ANCHOR INSTALLERS PER ACI/CRSI WHERE ANCHORS ARE INSTALLED IN HORIZONTAL OR VERTICAL CONDITIONS WITH SUSTAINED TENSION.

D. DEFERRED DESIGN SUBMITTALS SHALL BE SUBMITTED TO THE ENGINEER AND ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO SUBMISSION TO THE AUTHORITY HAVING JURISDICTION FOR PLAN CHECK AND BUILDING PERMIT. THE DESIGN SHALL BE IN ACCORDANCE WITH THE APPLICABLE BUILDING CODE AND PROJECT-SPECIFIC DESIGN CRITERIA LISTED IN SECTION 5.

1. SEISMIC RESISTANCE OF MEP EQUIPMENT, MACHINERY, AND ASSOCIATED PIPING. CONNECTIONS TO STRUCTURE SHALL CONFORM TO ASCE 7-16 CHAPTER 13, SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF OREGON, AND SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO FABRICATION.
2. FALL PROTECTION SYSTEMS.
3. METAL LADDERS, SHIPS LADDERS, AND SAFETY CAGES
4. SKYLIGHTS (AS APPLICABLE)

3. SPECIAL INSPECTION REQUIREMENTS AND TESTING

A. PROVIDE SPECIAL INSPECTIONS AND TESTING FOR ALL ITEMS AS REQUIRED BY THE GOVERNING JURISDICTION IN ADDITION TO THE TABLES ON S-010.

B. THE OWNER SHALL BE RESPONSIBLE FOR RETAINING AN INDEPENDENT, QUALIFIED INSPECTOR AND/OR TESTING LAB TO PERFORM ALL REQUIRED TESTING AND SPECIAL INSPECTIONS.

C. IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF NON-CONFORMING WORK. THIS NOTIFICATION SHALL SPECIFICALLY ADDRESS THE NON-CONFORMING WORK AND SHALL BE SEPARATE FROM THE SPECIAL INSPECTION REPORTS.

D. SPECIAL INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER AT THE TIME OF COMPLETION FOR REVIEW OF CONFORMANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS.

E. THE CONTRACTOR SHALL NOTIFY THE TESTING LAB A MINIMUM OF 48 HOURS PRIOR TO TIME OF INSPECTION.

F. THE FOLLOWING SPECIFIC ITEMS SHALL BE INSPECTED AND/OR TESTED BY THE TESTING LAB:

1) CONCRETE:
a. SAMPLE AND TEST CONCRETE AS FOLLOWS:
1. FABRICATE SPECIMENS FOR STRENGTH TESTS PER ACI 318.
2. PERFORM SLUMP AND AIR CONTENT TESTS.
3. DETERMINE TEMPERATURE OF THE CONCRETE.
b. REINFORCING STEEL AND WELDED WIRE MESH (INCLUDING PRE STRESSING TENDONS).
1. PLACEMENT (CONTINUOUS INSPECTION FOR SPECIAL MOMENT FRAMES)
2. OBTAIN AND REVIEW MILL TEST REPORTS.
3. WELDING.
c. CONCRETE PLACEMENT (CONTINUOUS INSPECTION).
d. CAST-IN-PLACE ANCHOR BOLTS.
e. CURING TEMPERATURE AND TECHNIQUES AND DURATION.
f. REVIEW MIX DESIGN FOR EACH CLASS OF CONCRETE.
g. REVIEW THE TICKET OF EACH BATCH OF CONCRETE DELIVERED.

2) ALL STRUCTURAL WELDING INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
a. CONTINUOUS INSPECTION FOR ALL BUTT WELDS, COMPLETE AND PARTIAL PENETRATION WELDS, GROOVE WELDS AND PLUG WELDS, INCLUDING WELDING OF REINFORCEMENT.
b. CONTINUOUS INSPECTION AND 100% ULTRASONIC TESTING FOR ALL COMPLETE PENETRATION WELDS BETWEEN THE PRIMARY MEMBERS OF MOMENT-RESISTING FRAMES. EXCEPT WHEN THE THICKNESS OF THE WELDED JOINT IS LESS THAN 5/16". IN ADDITION, MAGNETIC PARTICLE TESTING SHALL BE PERFORMED ON 25% OF ALL BEAM-TO-COLUMN COMPLETE PENETRATION WELDS.
c. CONTINUOUS INSPECTION OF ALL FILLET WELDS EXCEEDING 5/16".
d. PERIODIC VISUAL INSPECTION OF THE FOLLOWING ITEMS:
1. SINGLE-PASS FILLET WELDS NOT EXCEEDING 5/16".
2. FLOOR AND ROOF DECK WELDING.
3. WELDED STUDS WHEN USED FOR THE STRUCTURAL DIAPHRAGM OR COMPOSITE CONNECTIONS.
4. WELDED SHEET METAL STEEL FOR COLD-FORMED STUDS AND JOISTS.
5. WELDING OF STAIRS AND RAILING SYSTEMS.

3) POST INSTALLED ANCHORS. WHERE ANCHORS ARE LOADED IN SUSTAINED TENSION, INSPECTION SHALL BE CONTINUOUS. REFER TO THE DRAWINGS FOR LOCATIONS.

a. BRICK MASONRY
1. EPOXY THREADED RODS SHALL BE TESTED PER TESTING SCHEDULE IN TYPICAL DETAILS.
b. CONCRETE
1. EPOXY REBAR AND THREADED RODS
2. MECHANICAL ANCHORS

4) STRUCTURAL WOOD
a. PERIODIC SPECIAL INSPECTION FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS DRAG STRUTS, BRACES, SHEAR PANELS AND HOLD-DOWNS.

7) ALL EXCAVATIONS AND EARTH FORMS SHALL BE INSPECTED BY THE LOCAL BUILDING INSPECTOR AND INSPECTED BY THE GEOTECHNICAL ENGINEER AND/OR ENGINEER PRIOR TO PLACING CONCRETE.

4. STRUCTURAL OBSERVATIONS

A. STRUCTURAL OBSERVATIONS WILL BE UNDERTAKEN BY PERSONNEL UNDER THE SUPERVISION OF THE ENGINEER OF RECORD. STRUCTURAL OBSERVATIONS ARE SEPARATE FROM THE SPECIAL INSPECTION REQUIREMENTS OUTLINED ABOVE.

B. THE PURPOSE OF STRUCTURAL OBSERVATIONS IS TO REVIEW THE OVERALL PROCESS OF CONSTRUCTION AND ASCERTAIN ITS GENERAL COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS, THESE GENERAL NOTES, AND OTHER SPECIFICATIONS, WHERE APPLICABLE. OBSERVATIONS WILL BE NOTED IN REGULAR SITE REPORTS ISSUED TO THE OWNER'S REPRESENTATIVE.

C. UNLESS OTHERWISE AGREED UPON, THE ENGINEER OF RECORD SHALL BE ENGAGED TO PROVIDE, AT MINIMUM, A LEVEL OF CONSTRUCTION INVOLVEMENT NEEDED TO OBSERVE THE FOLLOWING AT SIGNIFICANT MILESTONES DURING THE CONSTRUCTION PROCESS:

1) FOUNDATION REINFORCEMENT AND CONSTRUCTION
2) STRUCTURAL STEEL FRAMING
3) LATERAL FORCE RESISTING ELEMENTS
4) WOOD FRAMING

ADDITIONAL ENGINEER INVOLVEMENT MAY BE DESIRED. ANY AGREEMENT TO THAT EFFECT SHALL BE MADE PRIOR TO THE START OF CONSTRUCTION.

D. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 3 DAYS PRIOR TO TIME OF OBSERVATION AND PROVIDE ACCESS FOR THE OBSERVATIONS.

E. AN OWNER'S REPRESENTATIVE MAY BE DESIGNATED, BY THE OWNER'S SPECIFIC AUTHORIZATION PRIOR TO THE START OF CONSTRUCTION, WHO WILL HAVE THE AUTHORITY TO REQUEST ADDITIONAL ENGINEER INVOLVEMENT OUTSIDE OF THE NORMAL DUTIES ASSOCIATED WITH STRUCTURAL OBSERVATION.

5. DESIGN BASIS

A. CONSTRUCT IN CONFORMANCE WITH THE BUILDING CODE NOTED ABOVE.

B. DESIGN LIVE LOADS (PSF):
ROOF 20

C. DESIGN DEAD LOADS

1) SUPERIMPOSED DEAD LOADS PER STRUCTURAL CALCULATIONS

D. EARTHQUAKE DESIGN DATA

1) RISK CATEGORY: BUILDING A: IV BUILDINGS B & C: III

1. ASCE 41 PERFORMANCE OBJECTIVE: BPOE
a. DAMAGE CONTROL (RC III) & IMMEDIATE OCCUPANCY (RC IV) @ BSE-1E
b. LIMITED SAFETY (RC III) & LIFE SAFETY (RC IV) @ BSE-2E

3) SITE CLASS: D

4) ASCE 41 BSE-2E SPECTRAL RESPONSE ACCELERATIONS:
a. SXS = 0.820 g
b. SX1 = 0.587 g

5) ASCE 41 BSE-1E SPECTRAL RESPONSE ACCELERATIONS:
a. SXS = 0.381 g
b. SX1 = 0.206 g

6) BASIC SEISMIC-FORCE RESISTING SYSTEM: WOOD FRAMED SHEAR WALLS

7) ANALYSIS PROCEDURE USED: LINEAR STATIC PROCEDURE

E. WIND:

1) RISK CATEGORY: IV (BUILDING A)
2) BASIC WIND SPEED: 107 MPH
3) WIND DIRECTIONALITY FACTOR, Kd: 0.85
4) EXPOSURE CATEGORY TYPE: B
5) TOPOGRAPHIC FACTOR, Kzt: 1.0
6) ENCLOSURE CLASSIFICATION: ENCLOSED

F. FOUNDATIONS:

1) SPREAD AND STRIP FOOTINGS: 2000 PSF

G. DESIGN SNOW LOADS

1) GROUND SNOW LOAD, Pg: 11 PSF
2) FLAT-ROOF SNOW LOAD, Pf: 20 PSF MIN.
3) SNOW EXPOSURE FACTOR, Ce: 1.0
4) SNOW LOAD IMPORTANCE FACTOR, I: 1.2 (BUILDING A)
5) THERMAL FACTOR, Ct: 1.0

6. FRAMING LUMBER

A. ALL FRAMING LUMBER SHALL BE GRADED PER WCLIB GRADING RULES NO. 17.

B. ALL FRAMING LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF INSTALLATION.

C. ALL POSTS AND BEAMS SHALL BE DOUGLAS FIR, #1.

D. ALL FLOOR AND ROOF JOISTS SHALL BE DOUGLAS FIR, #1.

E. ALL STUDS, PLATES, ETC., SHALL BE DOUGLAS FIR, CONSTRUCTION GRADE.

F. ENGINEERED WOOD PRODUCTS MAY BE USED AS SUBSTITUTES FOR SAWN LUMBER UPON REQUEST BY THE CONTRACTOR AND APPROVAL FROM THE ARCHITECT AND ENGINEER OF RECORD. CONTRACTOR SHALL SUBMIT MANUFACTURER'S TESTING REPORTS FOR APPROVAL.

7. PLYWOOD (PW) OR ORIENTED STRAND BOARD (OSB)

A. EACH PANEL SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE, TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION, AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE U.S. PRODUCT STANDARD PS-1. PLYWOOD GRADE SHALL CONFORM TO CD-X FOR PLYWOOD OR TYPE 2-M-W FOR ORIENTED STRAND BOARD, UNLESS OTHERWISE NOTED.

B. WHERE PLYWOOD IS PERMANENTLY EXPOSED TO WEATHER, IT SHALL BE EXTERIOR TYPE. OTHERWISE, PANEL SHEATHING SHALL BE EXPOSURE 1, PLYWOOD TO BE CC GRADE AT LOCATIONS EXPOSED TO WEATHER; CC OR CD GRADE ELSEWHERE.

C. PANELS TO BE 5-PLY MINIMUM, EXCEPT 3/8" PANELS TO BE 3-PLY MINIMUM.

D. PLYWOOD SHEETS AT FLOORS AND ROOFS SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO FLOORS AND RAFTERS. PLYWOOD AT FLOORS SHALL BE GLUED TO FRAMING BELOW (USE SOLVENT BASED GLUE COMPLYING WITH ASTM D3498 AND VOLATILE ORGANIC COMPOUND (VOC) LIMITS PER CALGREEN, LN-950 BY LIQUID NAILS OR APPROVED EQUIVALENT, UNLESS OTHERWISE SPECIFIED BY THE ARCHITECT. PROVIDE RING-SHANK NAILS AT FLOOR AND ROOF SHEATHING.

E. PLYWOOD SHEETS ON WALLS SHALL BE LAID WITH LONG DIMENSION VERTICAL. BLOCKS WITH A MINIMUM OF 3X BLOCK AND MEMBERS. ALL NAILING SHALL HAVE 3/8 INCH EDGE DISTANCE FOR FRAMING. BLOCKING AND PLYWOOD EDGES. USE SMOOTH-SHANK NAILS FOR PLYWOOD WALL SHEATHING.

F. STAPLES FOR PLYWOOD DIAPHRAGMS SHALL BE 14 GAGE ROUND SEMI-FLATTENED OR FLATTENED, PLAIN OR ZINC-COATED STEEL WIRE, WITH A NOMINAL CROWN WIDTH OF 7/16", DRIVEN BY PNEUMATIC OR MECHANICAL DEVICE.

G. PROVIDE 1/8" GAP BETWEEN PANELS UNLESS OTHERWISE NOTED.

H. PANELS SHALL HAVE THE FOLLOWING PROPERTIES UNLESS OTHERWISE NOTED.

1) 3/8" NOMINAL SHALL BE 3/8" ACTUAL THICKNESS WITH 24/0 SPAN RATING.
2) 1/2" NOMINAL SHALL BE 15/32" ACTUAL THICKNESS WITH 32/16 SPAN RATING.
3) 5/8" NOMINAL SHALL BE 19/32" ACTUAL THICKNESS WITH 40/20 SPAN RATING.
4) 3/4" NOMINAL SHALL BE 23/32" ACTUAL THICKNESS WITH 48/24 SPAN RATING.
5) 1 1/8" NOMINAL SHALL BE 1 1/8" ACTUAL THICKNESS WITH 48 O.C. FLOOR SPAN RATING.

8. ROUGH CARPENTRY

A. FOR SCHEDULE OF MINIMUM NAILING TABLE 2304.10.1 OF THE 2019 OREGON STRUCTURAL SPECIALTY CODE. 16d VINYL COATED SINKERS MAY BE SUBSTITUTED FOR 16d BOX OR COMMON NAILS FOR ROUGH FRAMING. SINKERS SHALL NOT BE USED WITH METAL CONNECTORS.

B. SILLS AND LEDGERS ON CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED DOUGLAS FIR. SILLS AND LEDGERS SHALL BE FASTENED TO THE CONCRETE WITH A MINIMUM OF TWO FASTENERS PER PIECE AND A FASTENER NO FURTHER THAN 9 INCHES FROM END OF EACH PIECE, UNLESS OTHERWISE NOTED.

C. PLACE JOISTS WITH CROWN UP.

D. RE-TIGHTEN ALL BOLTS PRIOR TO CLOSING IN WALLS.

E. WHEN METAL CONNECTORS, ANCHORS OR FASTENERS ITEMS ARE EXPOSED TO WEATHER AND/OR PRESSURE TREATED LUMBER THE METAL ITEMS ARE TO BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. SEE ADDITIONAL COATING REQUIREMENTS AS NOTED IN THE PRESSURE TREATMENT SECTION.

F. DOUBLE ALL JOISTS UNDER ALL PARALLEL PARTITIONS UNLESS NOTED OTHERWISE.

G. BLOCK ALL JOISTS AT SUPPORTS AND UNDER ALL PARTITIONS WITH MINIMUM 2X SOLID BLOCKING. BLOCK AND BRIDGE ROOF JOISTS AT 10 FEET AND FLOOR JOISTS AT 8 FEET UNLESS OTHERWISE NOTED.

H. 2X JOISTS SHALL BE SISTERED (VERTICAL NAIL LAMINATED) WITH SDWS 0.220x3 MIN. LENGTH AT 6" O.C. IN (2) ROWS STAGGERED UNLESS OTHERWISE NOTED.

I. ALL POSTS LOCATED OVER WOOD WALLS SHALL HAVE A POST OF EQUAL OR GREATER SIZE LOCATED IN THE WALL DIRECTLY BELOW UNLESS OTHERWISE NOTED.

J. THE STRUCTURAL DESIGN ASSUMES THAT ALL FLOORS AND ROOFS ARE CONSTRUCTED AND LOADED WITH FINISHES (OR EQUIVALENT WEIGHT) FOR A MINIMUM OF SEVEN (7) DAY PRIOR TO THE TIME OF DOOR AND WINDOW INSTALLATION.

K. ALL TIMBER FASTENERS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE SIMPSON STRONG-TIE'S STANDARD FASTENERS OR APPROVED EQUIVALENT INSTALLER PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. USP LUMBER CONNECTORS WITH REFERENCE NUMBERS FOR SUBSTITUTION MAY BE USED IN LIEU OF SIMPSON HARDWARE. ENGINEER MAY APPROVE OF OTHER SUBSTITUTIONS UPON THE FOLLOWING:

1) WRITTEN REQUEST FOR OTHER BRANDS
2) SUBMISSION OF MANUFACTURER'S TESTING REPORTS
3) REFERENCES TO PERTINENT DETAILS WHERE SUBSTITUTIONS ARE TO BE APPLIED.

L. ALL STRUCTURAL WOOD WALLS SHALL BE FRAMED WITH 2x4 MINIMUM STUDS AT 16" ON CENTER UNLESS OTHERWISE NOTED.

M. PRE-DRILL HOLES AS REQUIRED TO PREVENT SPLITTING OF WOOD.

9. PRESSURE TREATMENT

A. ALL LUMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH A.W.P.A. STANDARD U1, WITH A PRESERVATIVE AND RETENTION SUITABLE FOR THE APPLICATION (SEE BELOW). ALL CUT ENDS SHALL ALSO BE FIELD TREATED WITH A PRESERVATIVE. AS AN ALTERNATE, CONTRACTOR MAY USE REDWOOD OF EQUIVALENT STRENGTH PROPERTIES AS THOSE SHOWN ABOVE, AND AN APPROVED PRIMER. THE FOLLOWING USE CATEGORIES SHALL BE REQUIRED BASED ON THE APPLICATION:

1) UC1 - INTERIOR DRY
2) UC2 - INTERIOR DAMP
3) UC3A - EXTERIOR ABOVE GROUND - PROTECTED
4) UC3B - EXTERIOR ABOVE GROUND - UNPROTECTED
5) UC4A - GROUND CONTACT, GENERAL USE
6) UC4B - GROUND CONTACT, HEAVY DUTY USE
7) UC4C - GROUND CONTACT, EXTREME DUTY
8) UC5A - MARINE USE, NORTHERN WATERS

B. ALL EXTERIOR GLUED LAMINATED BEAMS EXPOSED TO WEATHER SHALL BE PRESSURE TREATED WITH A PRESERVATIVE, PENTACHLOROPHENOL WITH A MINIMUM NET RETENTION OF 0.40#/CU. FT. FOR BOTH GROUND USE. ALL CUT ENDS SHALL ALSO BE TREATED WITH A PRESERVATIVE. AS AN ALTERNATE, GLU-LAM BEAMS MAY BE FABRICATED OF ALASKAN, OR PORT ORFORD CEDAR, AND FIELD PAINTED WITH AN APPROVED PRIMER.

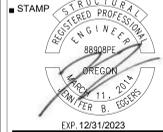
C. ALL PLYWOOD EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.

D. WHEN METAL CONNECTOR, ANCHOR OR FASTENER ITEMS ARE IN CONTACT WITH PRESSURE TREATED LUMBER AND/OR CORROSIVE ENVIRONMENTS THE CONTRACTOR SHALL USE CORROSION RESISTANT METAL ITEMS AS NOTED:

1) WHEN LUMBER IS TREATED WITH CHROMATED COPPER ARSENATE (CCA-C) OR DOT SODIUM ARSENATE (SBX) THE METAL ITEMS SHALL HAVE A MINIMUM G90 (0.90 OZ/SOFT) ZINC COATING OR ENGINEER APPROVED EQUIVALENT.
2) WHEN LUMBER IS TREATED WITH ALKALINE COPPER QUAT (ACQ-C OR ACQ-D), COPPER AZOLE (CBA-A OR CA-B) OR OTHER BORATE (NON-DOT) TREATMENT THE METAL ITEMS SHALL HAVE A MINIMUM G185 (1.85 OZ/SOFT) ZINC COATING OR ENGINEER APPROVED EQUIVALENT.
3) WHEN LUMBER IS TREATED WITH OTHER TREATMENTS (NOT AMMONIACAL COPPER ZINC ARSENATE (ACZA) SEE 4 BELOW) OR IS EXPOSED TO CORROSIVE ENVIRONMENTS NOT LIST ABOVE THE METAL ITEMS SHALL BE TYPE 316L STAINLESS STEEL OR ENGINEER APPROVED EQUIVALENT.
4) AMMONIACAL COPPER ZINC ARSENATE (ACZA) IS NOT PERMITTED UNLESS APPROVED BY THE ENGINEER.
5) CONTRACTOR IS TO CONFIRM LUMBER PRESSURE TREATMENT TYPE PRIOR TO PURCHASE OF METAL ITEMS.
6) AS AN ALTERNATIVE, FOR THE SITUATION WHEN THE BASE OF A HOLDOWN IS IN CONTACT WITH A PRESSURE TREATED SILL PLATE THE CONTRACTOR CAN PROVIDE A PRESSURE TREATMENT BARRIER BETWEEN THE BASE OF THE HOLDOWN AND THE SILL PLATE.

10. FINISHES - FOR WORK ON EXISTING BUILDINGS

A. REPLACE ALL DAMAGED FINISH MATERIALS WITH NEW MATERIALS OF EQUIVALENT QUALITY AND KIND. SUBMIT SAMPLES AND/OR PRESENT SAMPLE INSTALLATION TO OWNER FOR APPROVAL PRIOR TO INSTALLATION.



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Table with columns: No., DESCRIPTION, DATE. Includes sections for ISSUE / REVISION, DRAWN, CHECKED BY, PROJECT No., DATE, ISSUED FOR, DRAWING TITLE (GENERAL STRUCTURAL NOTES), and SHEET NO.

S-001

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ISSUE / REVISION

No.	DESCRIPTION	DATE

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■ CHECKED BY: ENS

■ PROJECT No. 22082.10

■ DATE: 07/08/2022

■ ISSUED FOR BID | PERMIT

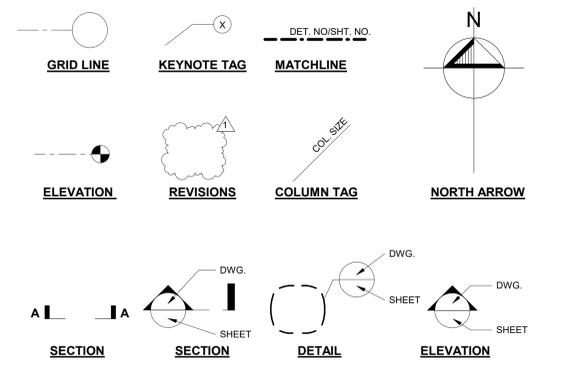
■ DRAWING TITLE

**SHEET LIST,  
 GENERAL  
 SYMBOLS &  
 ABBREVIATIONS**

■ SHEET NO.

**S-002**

Sheet List - Phase 1	
Sheet Number	Sheet Name
S-001	GENERAL STRUCTURAL NOTES
S-002	SHEET LIST, GENERAL SYMBOLS & ABBREVIATIONS
S-010	SPECIAL INSPECTIONS AND TESTING REQUIREMENTS
S-101	BUILDING YEAR PLAN
S-102	PERFORMANCE OBJECTIVE PLAN
S-161.1	ROOF FRAMING PLAN - SECTOR 1
S-161.2	ROOF FRAMING PLAN - SECTOR 2
S-161.3	ROOF FRAMING PLAN - SECTOR 3
S-161.4	ROOF FRAMING PLAN - SECTOR 4
S-801	WOOD FRAMING DETAILS



**2** GENERAL SYMBOLS 1/4" = 1'-0"

(A)	ABOVE	LLV	LONG LEG VERTICAL
A.B.	ANCHOR BOLT	LV.	LEVEL
ADDL.	ADDITIONAL	L.S.	LAG SCREW
ADJ.	ADJACENT	LVL	LAMINATED VENEER LUMBER
A.F.F.	ARCHITECTURAL FINISHED FLOOR	L.W.	LIGHT WEIGHT
APPROX.	APPROXIMATE	MAX.	MAXIMUM
ARCH.	ARCHITECT	M.B.	MACHINE BOLT
A.T.R.	ALL THREAD ROD	MECH.	MECHANICAL
(B)	BELOW	MIN.	MINIMUM
BLDG.	BUILDING	MISC.	MISCELLANEOUS
BLKG.	BLOCKING	ML	MICROLLAM
BM.	BEAM	MTL.	METAL
B.N.	BOUNDARY NAILING	(N)	NEW
B.O.	BOTTOM OF	N.I.C.	NOT IN CONTRACT
BOT.	BOTTOM	N.S.	NEAR SIDE
BTWN.	BETWEEN	N.T.S.	NOT TO SCALE
C.	CENTERLINE	N.W.	NORMAL WEIGHT
C.F.	CUBIC FEET	O.C.	ON CENTER
C.I.P.	CAST IN PLACE	O.D.	OUTSIDE DIAMETER
C.J.	CONSTRUCTION JOINT	OPNG.	OPENING
CLR.	CLEAR	OPP.	OPPOSITE
CMU	CONCRETE MASONRY UNIT	PAR.	PARALLEL
CNTR.	CENTER	PERP.	PERPENDICULAR
COL.	COLUMN	PL	PLATE
CNTRSNK.	COUNTER SUNK	PSL	PARALLEL STRAND LUMBER
COLL.	COLLECTOR	PLYWD.	PLYWOOD
COMP.	COMPACTED	P.T.	PRESSURE TREATED
CONC.	CONCRETE	P/T	POST TENSIONED
COND.	CONDITION	REF.	REFERENCE
CONN.	CONNECTION	R.C.	RELATIVE COMPACTION
CONT.	CONTINUOUS	REINF.	REINFORCING
DBL.	DOUBLE	REQ'D	REQUIRED
DET.	DETAIL	REV.	REVISION
DP	DEEP	S.A.D.	SEE ARCHITECTURAL DRAWINGS
DIA. Ø	DIAMETER	S.C.D.	SEE CIVIL DRAWINGS
DIAPH.	DIAPHRAGM	S.L.D.	SEE LANDSCAPE DRAWINGS
DM.	DIMENSION	S.M.D.	SEE MECHANICAL DRAWINGS
DN.	DOWN	SCH.	SCHEDULE
DWG.	DRAWING	SHT.	SHEET
(E)	EXISTING	SHTG.	SHEATHING
EA.	EACH	SIMP.	SIMPSON
E/E	EACH END	SIM.	SIMILAR
E/F	EACH FACE	S.O.G.	SLAB ON GRADE
EL.	ELEVATION	SPEC.	SPECIFICATIONS
EMB.	EMBEDMENT	SO.	SQUARE
E.N.	EDGE NAILING	STAG.	STAGGERED
EQ.	EQUAL	STD.	STANDARD
EQUIV.	EQUIVALENT	STIFF.	STIFFENER
E/S	EACH SIDE	STL.	STEEL
EW	EACH WAY	S.W.	SHEAR WALL
EXT.	EXTERIOR	SYM.	SYMMETRIC
FDN.	FOUNDATION	T&B	TOP AND BOTTOM
FIN.	FINISH	T&G	TONGUE AND GROOVE
FLR.	FLOOR	THK.	THICK
F.N.	FIELD NAILING	THRD.	THREADED
F.S.	FAR SIDE	THRU	THROUGH
FT.	FEET	T.O.	TOP OF
FTG.	FOOTING	T.O.C.	TOP OF CONCRETE
GA.	GALVE	T.O.S.	TOP OF SLAB/STEEL
GALV.	GALVANIZED	TRNSV.	TRANSVERSE
G.L.	GRID LINE	TS	TUBE STEEL
GLB.	GLUED LAMINATED BEAM	Typ.	TYPICAL
HD	HOLDOWN	U.O.N.	UNLESS OTHERWISE NOTED
H.D.G.	HOT DIP GALVANIZED	VERT.	VERTICAL
HDR.	HEADER	V.I.F.	VERIFY IN FIELD
HORIZ.	HORIZONTAL	V.W.A.	VERIFY WITH ARCHITECT
HT.	HEIGHT	W/	WITH
HSS	HOLLOW STRUCTURAL STEEL	WD.	WOOD
I.D.	INSIDE DIAMETER	W/O	WITHOUT
IN.	INCH	W.P.	WORKING POINT
INT.	INTERIOR	WT.	WEIGHT
LB	POUND		
LONG.	LONGITUDINAL		

**1** ABBREVIATIONS N.T.S.

**STATEMENT OF SPECIAL INSPECTIONS**

- SPECIAL INSPECTIONS AND TESTS SHALL BE PERFORMED BY AN INDEPENDENT QUALIFIED INSPECTION AND/OR TESTING AGENCY APPROVED BY THE JURISDICTION FOR SUCH WORK AND IN ACCORDANCE WITH CHAPTER 17 OF THE CODE. THESE SPECIAL INSPECTIONS AND TESTS ARE IN ADDITION TO THE INSPECTIONS PERFORMED BY THE BUILDING OFFICIAL.
- THE OWNER SHALL BE RESPONSIBLE FOR RETAINING THE SPECIAL INSPECTION AND/OR TESTING AGENCY.
- THE SPECIAL INSPECTION AND/OR TESTING AGENCY SHALL KEEP RECORDS AND SUBMIT SPECIAL INSPECTION AND TEST REPORTS TO THE BUILDING OFFICIAL AND THE STRUCTURAL ENGINEER OF RECORD IN ACCORDANCE WITH SECTIONS 1704.2.4 AND 1704.5 OF THE CODE AND JURISDICTION-SPECIFIC REQUIREMENTS.
- THE CONTRACTOR SHALL NOTIFY THE TESTING LAB A MINIMUM OF 48 HOURS PRIOR TO TIME OF INSPECTION.
- THE CONSTRUCTION OR WORK FOR WHICH SPECIAL INSPECTION OR TESTING IS REQUIRED SHALL REMAIN ACCESSIBLE AND EXPOSED FOR SPECIAL INSPECTION OR TESTING PURPOSES UNTIL COMPLETION OF THE REQUIRED SPECIAL INSPECTIONS OR TESTS.
- IF INITIAL TESTS OR INSPECTIONS MADE BY THE OWNER'S TESTING OR INSPECTION AGENCY REVEAL THAT ANY PORTION OF THE WORK DOES NOT COMPLY WITH THE CONTRACT DOCUMENTS, ADDITIONAL TESTS, INSPECTIONS, AND NECESSARY REPAIRS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL NOTIFY THE ENGINEER AND OWNER IMMEDIATELY OF NON-COMFORMING WORK. THIS NOTIFICATION SHALL SPECIFICALLY ADDRESS THE NON-COMFORMING WORK AND SHALL BE SEPARATE FROM THE SPECIAL INSPECTION REPORTS.
- SPECIAL INSPECTION REPORTS SHALL BE SENT TO THE ENGINEER AT THE TIME OF COMPLETION FOR REVIEW OF CONFORMANCE WITH THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS.
- SPECIAL INSPECTIONS AND TESTS FOR SEISMIC RESISTANCE SHALL BE PERFORMED FOR THE DESIGNATED SEISMIC SYSTEM/SEISMIC FORCE RESISTING COMPONENT WHEN APPLICABLE AND AS PER SECTIONS 1705.12 & 1705.13 OF THE CODE.
  - DESIGNATED SEISMIC SYSTEMS/SEISMIC FORCE RESISTING SYSTEM: "NA" SEE THE ABOVE-REFERENCED CODE SECTIONS FOR ADDITIONAL SPECIAL INSPECTION AND TEST REQUIREMENTS FOR STRUCTURAL STEEL, STRUCTURAL WOOD, COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION, DESIGNATED SEISMIC SYSTEMS, ARCHITECTURAL COMPONENTS, MECH COMPONENTS, STORAGE RACKS, SEISMIC ISOLATIONS SYSTEMS, AND COLD-FORMED STEEL SPECIAL BOLTED MOMENT FRAMES.
- SPECIAL INSPECTIONS FOR WIND RESISTANCE SHALL BE PERFORMED FOR THE MAIN WIND FORCE RESISTING SYSTEM AND WIND RESISTING COMPONENTS WHEN APPLICABLE AND AS PER SECTION 1705.11 OF THE CODE.
  - MAIN WIND FORCE RESISTING SYSTEM/WIND RESISTING COMPONENT: "NA" SEE THE ABOVE-REFERENCED CODE SECTIONS FOR ADDITIONAL SPECIAL INSPECTION REQUIREMENTS FOR STRUCTURAL WOOD, COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION, AND WIND-RESISTING COMPONENTS.
- EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND OR SEISMIC FORCE RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR A WIND OR SEISMIC RESISTING COMPONENT LISTED ABOVE SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN ACKNOWLEDGMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THIS STATEMENT OF SPECIAL INSPECTIONS.
- STEEL CONSTRUCTION: SPECIAL INSPECTIONS FOR STEEL ELEMENTS OF BUILDINGS AND STRUCTURES SHALL BE AS REQUIRED BY SECTION 1705.2 OF THE CODE AND IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360-10, INCLUDING THE SPECIAL INSPECTION TABLE SHOWN HEREIN. SEE ALSO REQUIREMENTS NOTED FOR SEISMIC AND WIND RESISTANCE OF INSPECTION NOTES #6 AND #9.
- CONCRETE CONSTRUCTION: SPECIAL INSPECTIONS AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1705.3 OF THE CODE, INCLUDING THE SPECIAL INSPECTION TABLE SHOWN HEREIN. CONCRETE SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR:
  - ISOLATED SPREAD FOOTINGS OF BUILDINGS 3 STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
  - NONSTRUCTURAL CONCRETE SLABS SUPPORTED DIRECTLY ON THE GROUND, WHERE THE EFFECTIVE PRESTRESS IN THE CONCRETE IS LESS THAN 150 PSI.
- WOOD CONSTRUCTION: SPECIAL INSPECTIONS FOR WOOD CONSTRUCTION SHALL BE AS REQUIRED BY SECTION 1705.5 OF THE CODE. SEE ALSO REQUIREMENTS NOTED FOR SEISMIC AND WIND RESISTANCE OF INSPECTION NOTES #6 AND #9.
- SOILS: SPECIAL INSPECTIONS FOR EXISTING SOIL CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS SHALL BE AS REQUIRED BY SECTIONS 1705.6 THROUGH 1705.9 OF THE CODE, INCLUDING THE SPECIAL INSPECTION TABLES SHOWN HEREIN.

**1 STATEMENT OF SPECIAL INSPECTIONS**

N.T.S.

1  
S-010

TESTING FOR SEISMIC RESISTANCE (2019 OSSC SECTION 1705.13)		
TESTING		
1. STRUCTURAL STEEL TESTING AND QUALIFICATION FOR SEISMIC RESISTANCE: TEST IN ACCORDANCE WITH THE QUALITY ASSURANCE REQUIREMENTS OF AISC 341.	OSSC SEC. 1705.13.1, AISC 341-16	
2. NONSTRUCTURAL COMPONENTS: REVIEW CERTIFICATE OF COMPLIANCE FOR NONSTRUCTURAL COMPONENT, SUPPORT, OR ATTACHMENT FOR CONFORMANCE WITH ASCE 7-16 SECTION 13.2.1 WHERE QUALIFICATION IS ACHIEVED THROUGH ANALYSIS, TESTING, OR EXPERIENCE DATA.	OSSC SEC. 1705.13.2	
3. DESIGNATED SEISMIC SYSTEMS: REVIEW CERTIFICATE OF COMPLIANCE FOR ELEMENTS OF THE DESIGNATED SEISMIC SYSTEM (WHERE NOTED ON THESE DRAWINGS) FOR CONFORMANCE WITH ASCE 7-16 SECTION 13.2.2.	OSSC SEC. 1705.13.3	
4. SEISMIC ISOLATION SYSTEMS: TEST SEISMIC ISOLATION SYSTEM IN ACCORDANCE WITH ASCE 7-16 SECTION 17.8.	OSSC SEC. 1705.13.4, ASCE 7-16 SEC. 17.8	

**2 MINIMUM TEST FOR SEISMIC RESISTANCE**

N.T.S.

2  
S-010

REQUIRED VERIFICATION AND INSPECTION FOR SEISMIC RESISTANCE (2019 OSSC SECTION 1705.12)			
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC*	REFERENCED STANDARD
1. STRUCTURAL STEEL SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE: INSPECTION OF STRUCTURAL STEEL IN ACCORDANCE WITH AISC 341.	-	0	OSSC SEC. 1705.12.1 AISC 341
2. STRUCTURAL WOOD SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.2
a. INSPECTION OF FIELD GLUING OPERATIONS OF ELEMENTS OF THE SEISMIC-FORCE RESISTING SYSTEM.	X	-	
b. INSPECTION OF NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS*, WOOD SHEAR PANELS*, WOOD DIAPHRAGMS*, DRAG STRUTS, AND HOLD-DOWNS.	-	X	* NOT REQUIRED WHERE FASTENER SPACING OF SHEATHING IS MORE THAN 4" O.C.
3. DESIGNATED SEISMIC SYSTEMS VERIFICATIONS: INSPECT AND VERIFY THAT THE COMPONENT LABEL, ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE IN ACCORDANCE WITH SECTION 1705.12.4.	-	X	OSSC SEC. 1705.12.4
4. ARCHITECTURAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.5
a. INSPECTION DURING ERECTION AND FASTENING OF EXTERIOR CLADDING.	-	X	
b. INSPECTION DURING ERECTION AND FASTENING OF INTERIOR AND EXTERIOR VENEER.	-	X	
c. INSPECTION DURING THE ERECTION AND FASTENING OF INTERIOR AND EXTERIOR NONBEARING WALLS.	-	X	
d. INSPECTION DURING ANCHORAGE OF ACCESS FLOORS.	-	X	
5. PLUMBING, MECHANICAL AND ELECTRICAL COMPONENTS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE:			OSSC SEC. 1705.12.6
a. INSPECTION DURING THE ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS.	-	X	
b. INSPECTION DURING THE ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT.	-	X	
c. INSPECTION DURING INSTALLATION AND ANCHORAGE OF PIPING SYSTEMS DESIGNED TO CARRY HAZARDOUS MATERIALS, AND THEIR ASSOCIATED MECHANICAL UNITS.	-	X	
d. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS.	-	X	
e. INSPECTION DURING THE INSTALLATION AND ANCHORAGE OF VIBRATION ISOLATION SYSTEMS.	-	X	
f. INSPECTION OF MECHANICAL AND ELECTRICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING SYSTEMS AND THEIR STRUCTURAL SYSTEMS, WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, E OR F FOR MINIMUM CLEARANCES.	-	X	
6. STORAGE RACKS SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE: INSPECTION DURING THE ANCHORAGE OF STORAGE RACKS 5 FEET OR GREATER IN HEIGHT.	-	X	OSSC SEC. 1705.12.7
7. SEISMIC ISOLATION SYSTEMS: INSPECTION DURING THE FABRICATION AND INSTALLATION OF ISOLATOR UNITS AND ENERGY DISSIPATION DEVICES USED AS PART OF THE SEISMIC ISOLATION SYSTEM.	-	X	OSSC SEC. 1705.12.8

\*"0" INDICATES AN ACTIVITY THAT IS EITHER A ONE-TIME ACTIVITY OR ONE WHOSE FREQUENCY IS ON A RANDOM BASIS OR IS DEFINED IN SOME OTHER MANNER (SEE REFERENCED CODE SECTION).

**3 MINIMUM INSPECTION FOR SEISMIC RESISTANCE**

N.T.S.

3  
S-010

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION (2019 OSSC SECTION 1705.2.1 AND AISC 360-16 CHAPTER N)			
VERIFICATION AND INSPECTION	PERFORM <sup>B</sup>	OBSERVE <sup>C</sup>	REF. STANDARD
1. FABRICATOR AND ERECTOR DOCUMENTS: VERIFY REPORTS, CERTIFICATIONS, SPECIFICATIONS AND QUALIFICATIONS LISTED IN AISC 360-16 SECTION N3 FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS.	-	X	AISC 360 N3
2. MATERIAL VERIFICATION OF STRUCTURAL STEEL.	-	X	
3. VERIFY MEMBER LOCATIONS, BRACES, STIFFENERS, AND APPLICATION OF JOINT DETAILS AT EACH CONNECTION COMPLY WITH CONSTRUCTION DOCUMENTS.	-	X	AISC 360 N5.8
4. WELDING			AISC 360 N5.4
A. INSPECTION TASKS PRIOR TO WELDING			AISC TABLE N5-4-1
1. WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	X	-	
2. WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	X	-	
3. MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE.	X	-	
4. MATERIAL IDENTIFICATION (TYPE/GRADE).	-	X	
5. WELDER IDENTIFICATION SYSTEM (THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.).	-	X	
6. FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY): JOINT PREPARATIONS, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), AND BACKING TYPE AND FIT (IF APPLICABLE).	-	X	
7. FIT-UP OF CJP GROOVE WELDS OF HSS T-, Y- AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY): JOINT PREPARATIONS, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES) AND TACKING (TACK WELD QUALITY AND LOCATION).	X	-	
8. CONFIGURATION AND FINISH OF ACCESS HOLES.	-	X	
9. FIT-UP OF FILLET WELDS: DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), AND TACKING (TACK WELD QUALITY AND LOCATION).	-	X	
10. CHECK WELDING EQUIPMENT.	-	X	
B. INSPECTION TASKS DURING WELDING			AISC TABLE N5-4-2
1. CONTROL AND HANDLING OF WELDING CONSUMABLES: PACKAGING, AND EXPOSURE CONTROL.	-	X	
2. NO WELDING OVER CRACKED TACK WELDS.	-	X	
3. ENVIRONMENTAL CONDITIONS: WIND SPEED WITHIN LIMITS, AND PRECIPITATION AND TEMPERATURE.	-	X	
4. WPS FOLLOWED: SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), AND PROPER POSITION (F,V,H,OH).	-	X	
5. WELDING TECHNIQUES: INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, AND EACH PASS MEETS QUALITY REQUIREMENTS.	-	X	
6. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS.	X	-	
C. INSPECTION TASKS AFTER WELDING			AISC TABLE N5-4-3
1. WELDS CLEANED.	-	X	
2. SIZE, LENGTH, AND LOCATION OF WELDS.	X	-	
3. WELDS MEET VISUAL ACCEPTANCE CRITERIA: CRACK PROHIBITION, WELD/BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, AND POROSITY.	X	-	
4. ARC STRIKES.	X	-	
5. k-AREA (WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3" OF THE WELD).	X	-	
6. WELD ACCESS HOLE IN ROLLED HEAVY SHAPES AND BUILT-UP HEAVY SHAPES ARE WELDED, VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.	X	-	
7. BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED).	X	-	
8. REPAIR ACTIVITIES.	X	-	
9. DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER.	X	-	
10. NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF THE EOR.	-	X	
D. NONDESTRUCTIVE TESTING OF WELDED JOINTS (EXCEPTION NDT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP. SEE AISC 360-16 N7).			AISC 360 N5.5
1. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY III OR IV, UT ON 100% MAY BE REDUCED TO 25% PER AISC 360-16 N5e.	X	-	
2. COMPLETE PENETRATION GROOVE WELDS 5/16" OR GREATER IN RISK CATEGORY II, UT ON 10%, MAY INCREASE TO 100% PER AISC 360-16 N5f.	X	-	
3. THERMALLY CUT SURFACES OF ACCESS HOLES WHEN MATERIAL I-2".	X	-	
4. WELDED JOINTS SUBJECT TO FATIGUE WHEN REQUIRED BY AISC 360, APPENDIX 3, TABLE A-3.1.	X	-	
5. FABRICATOR'S NDT REPORTS WHEN FABRICATOR PERFORMS NDT.	X	-	

**4 MINIMUM TESTS AND SPECIAL INSPECTION OF STEEL CONSTRUCTION**

N.T.S.

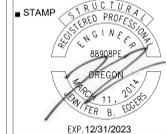
4  
S-010

VERIFICATION AND INSPECTION	PERFORM <sup>B</sup>	OBSERVE <sup>C</sup>	REF. STANDARD
5. BOLTING			AISC 360 N5.6
A. INSPECTION TASKS BEFORE BOLTING			AISC TABLE N5-6-1
1. MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS.	X	-	
2. FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	-	X	
3. CORRECT FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	-	X	
4. CORRECT BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.	-	X	
5. CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	-	X	
6. PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENT FOR FASTENER ASSEMBLIES AND METHODS USED.	X	-	
7. PROTECTED STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS, AND OTHER FASTENER COMPONENTS.	-	X	
B. INSPECTION TASKS DURING BOLTING			AISC TABLE N5-6-2
1. FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.	-	X	
2. JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION.	-	X	
3. FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING.	-	X	
4. FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.	-	X	
C. INSPECTION TASKS AFTER BOLTING: DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	X	-	AISC TABLE N5-6-3
6. PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL. VERIFY DIAMETER, GRADE, TYPE, AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE.	X	-	AISC 360 N5.7

a. SEE AISC 360-10 CHAPTER N FOR ADDITIONAL INFORMATION NOT SHOWN HEREIN.

b. "PERFORM" INDICATES PERFORMANCE OF THE TASK FOR EACH STEEL ELEMENT, MEMBER, WELDED JOINT, OR BOLTED CONNECTION.

c. "OBSERVE" INDICATES OBSERVATION OF ITEM ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. THIS REQUIRES PURPOSEFUL, REGULAR, RANDOM INSPECTION WITH FREQUENCY THAT IS APPROPRIATE TO ASSURE THAT THE PROCESS IS BEING PERFORMED CORRECTLY.



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**ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS**  
**BEAVERTON SCHOOL DISTRICT**  
**MCKINLEY ELEMENTARY SCHOOL**  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



BEAVERTON SCHOOL DISTRICT

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■ DATE: 07/08/2022

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■ DRAWING TITLE  
**SPECIAL INSPECTIONS AND TESTING REQUIREMENTS**

■ SHEET NO.

**S-010**



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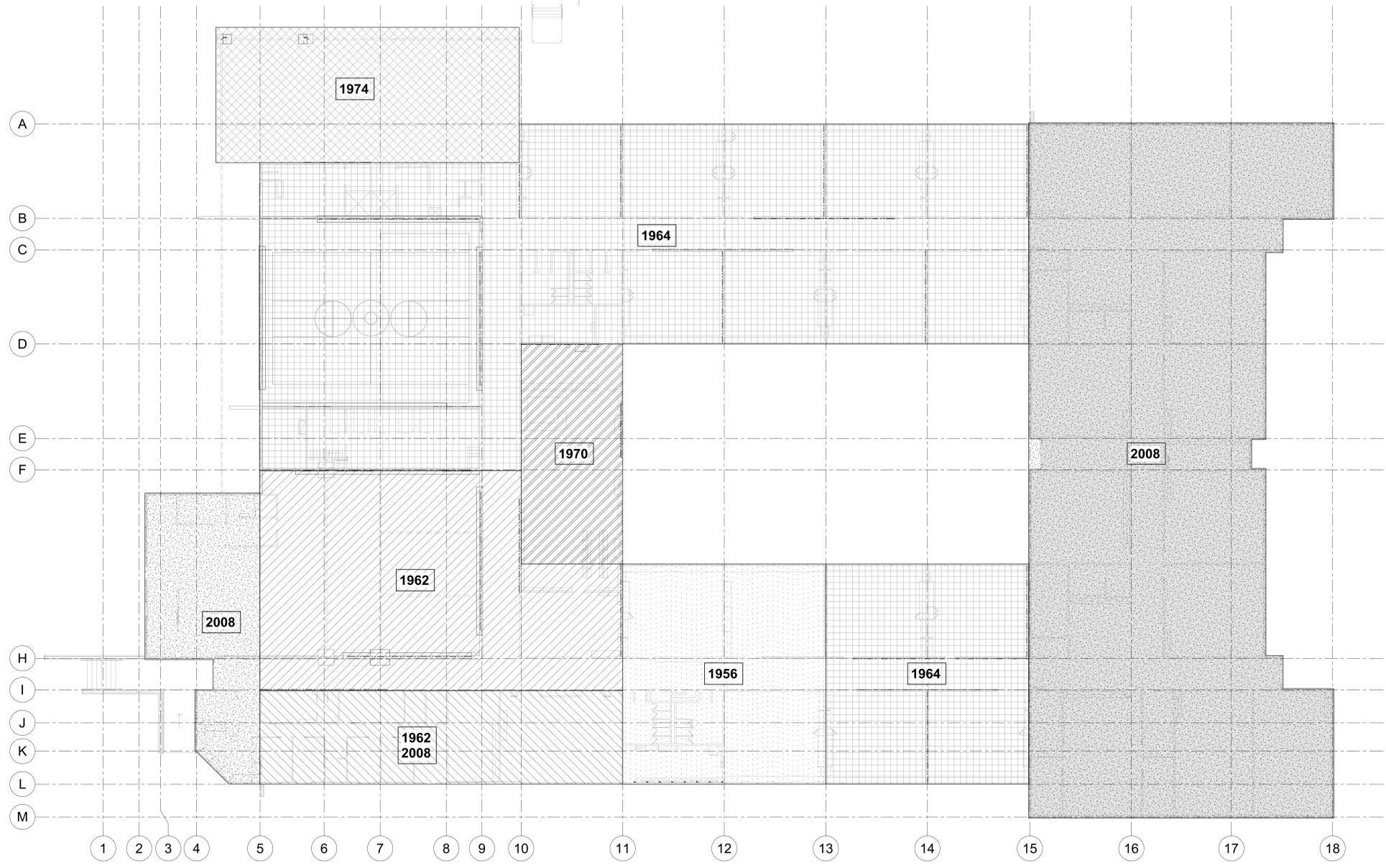
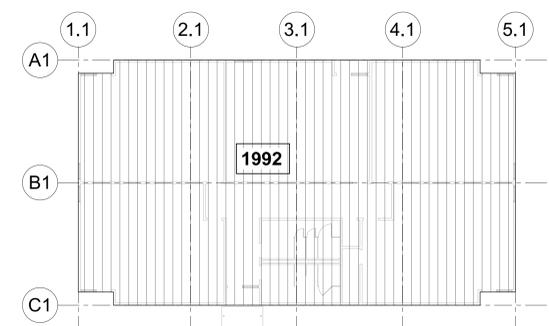


**LEGEND:**

**BUILDING YEAR/ CONSTRUCTION**

-  1956 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1962 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1964 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1970 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1974 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1992 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  2008 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)
-  1962  
2008 BUILDING PORTION  
TYPE: WOOD FRAMED (W2)

**NOTE:**  
 1. W2: WOOD FRAMED, COMMERCIAL OR INDUSTRIAL



1 BUILDING YEAR PLAN

1/16" = 1'-0"

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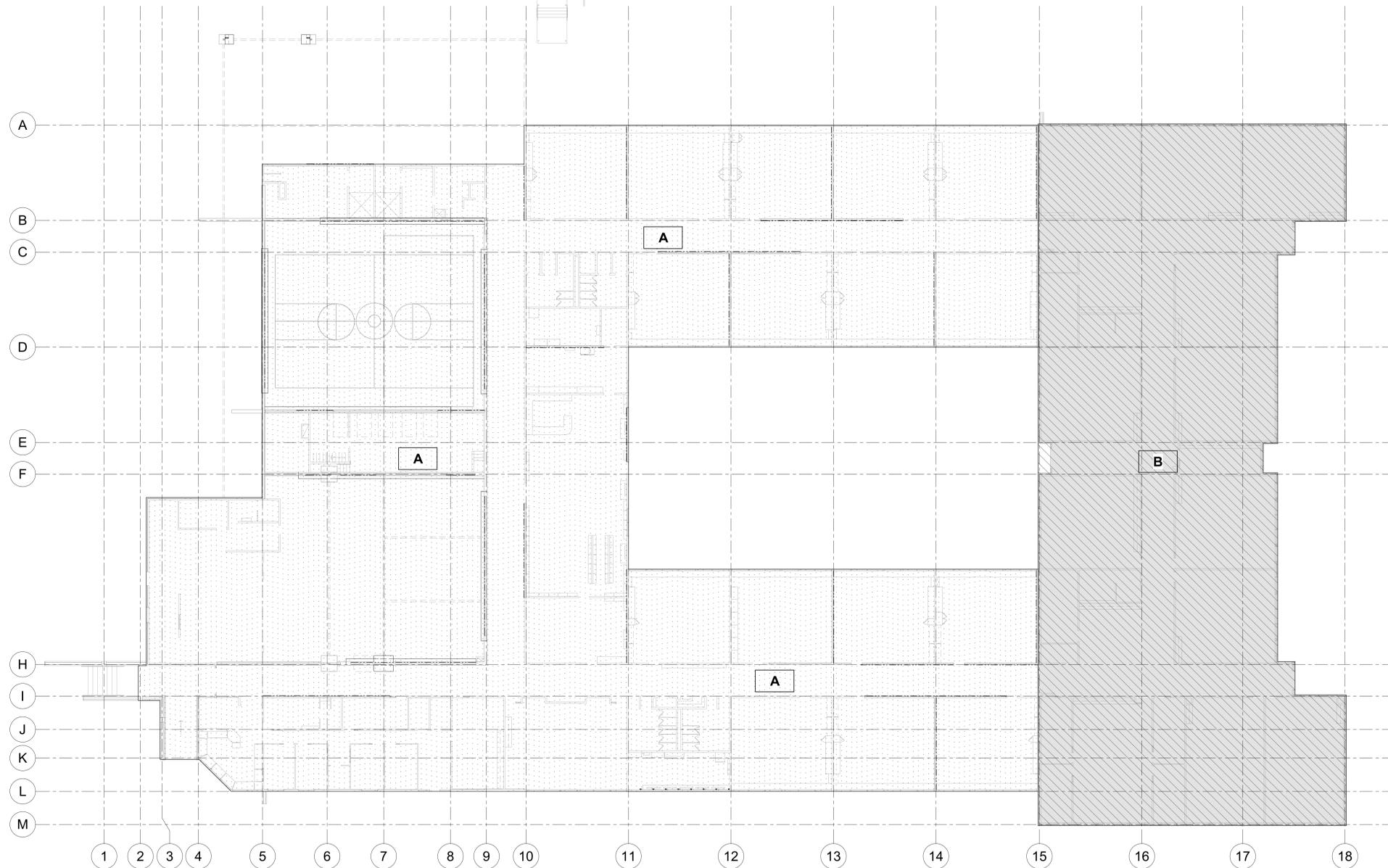
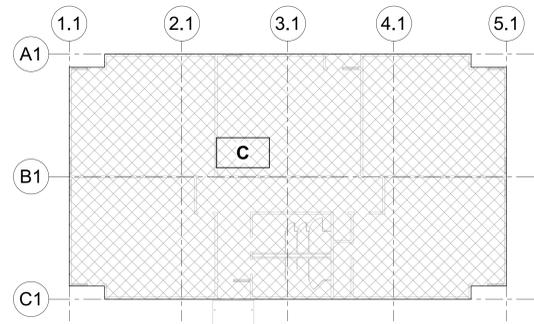
■ DRAWING TITLE  
**BUILDING YEAR PLAN**

■ SHEET NO.

**S-101**

**LEGEND:**

	<b>BUILDING A</b> RISK CATEGORY: IV STRUCTURAL PERFORMANCE LIFE SAFETY (S-3) AT BSE-2E IMMEDIATE OCCUPANCY (S-1) AT BSE-1E NONSTRUCTURAL PERFORMANCE HAZARD REDUCTION (N-D) AT BSE-2E POSITION RETENTION (N-B) AT BSE-1E
	<b>BUILDING B</b> RISK CATEGORY: III STRUCTURAL PERFORMANCE LIMITED SAFETY (S-4) AT BSE-2E NONSTRUCTURAL PERFORMANCE HAZARD REDUCTION (N-D) AT BSE-2E
	<b>BUILDING C</b> RISK CATEGORY: III STRUCTURAL PERFORMANCE LIMITED SAFETY (S-4) AT BSE-2E NONSTRUCTURAL PERFORMANCE HAZARD REDUCTION (N-D) AT BSE-2E



1 PERFORMANCE OBJECTIVES - OVERALL FLOOR PLAN  
S-102 1/16" = 1'-0"



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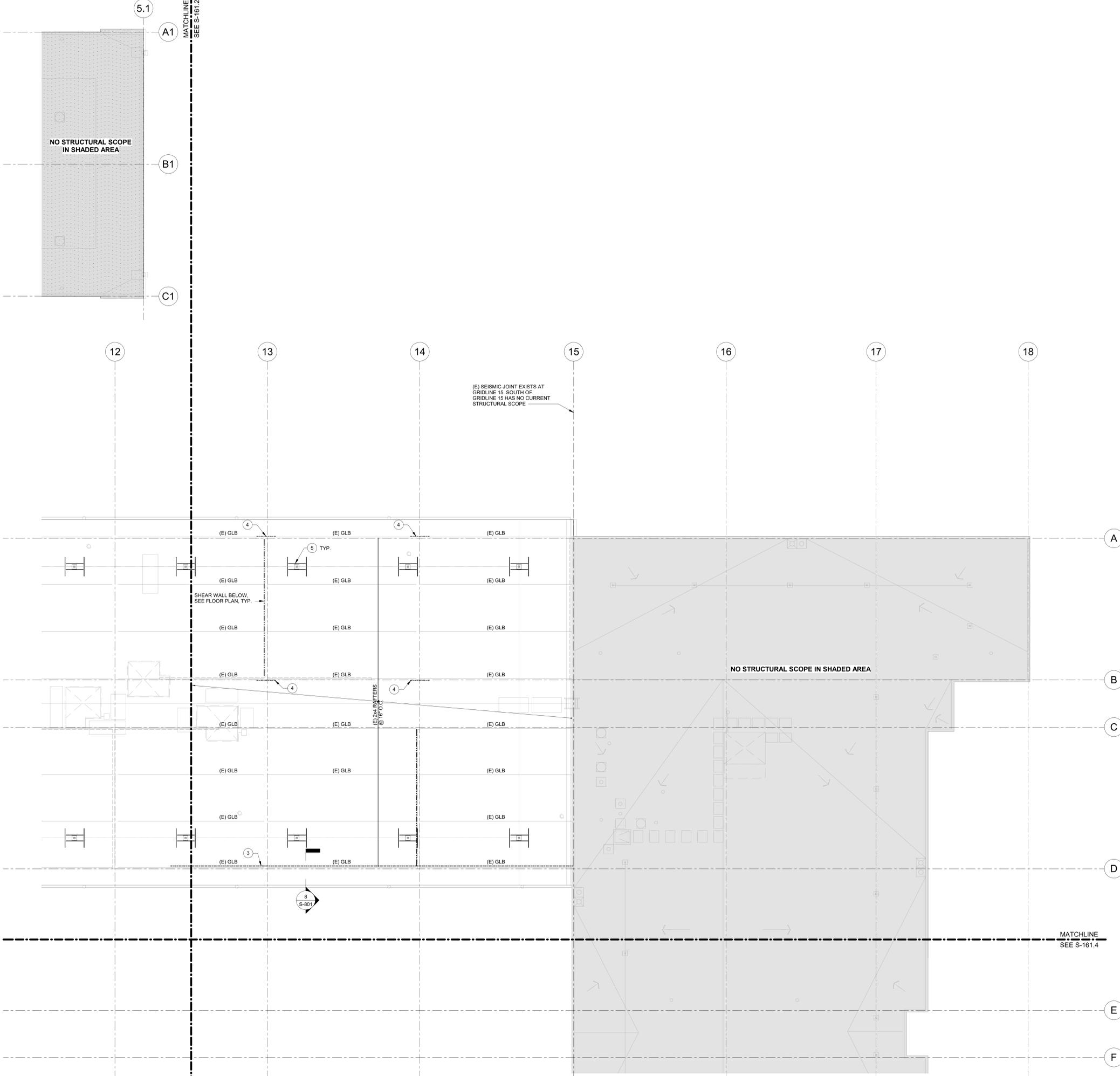
DRAWING TITLE  
**PERFORMANCE OBJECTIVE PLAN**

SHEET NO.  
**S-102**

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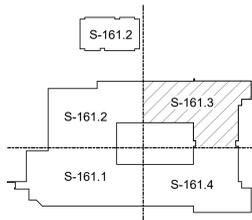




- SHEET NOTES:**
- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND INFORMATION NOT SHOWN.
  - SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR RELATED NON-STRUCTURAL ELEMENTS EMBEDDED OR CONNECTED TO THE STRUCTURE.
  - CONTRACTOR TO FIELD VERIFY ALL EXISTING STRUCTURAL ELEMENTS AND CONDITIONS NOTED ON PLAN.
  - FIELD VERIFY ALL FINISHES AND SERVICES TO BE REPLACED FOR CONSTRUCTION.
  - REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR NON-STRUCTURAL ITEMS REQUIRING RETROFIT.
  - (PH2) INDICATES FUTURE WORK ("SEISMIC IMPROVEMENTS" SCOPE) NOT INCLUDED IN THE SCOPE OF THIS PERMIT OR DRAWING SET.

- KEY NOTES:**
- PROVIDE NEW CMST14 STRAP OVER (N) OR (E) PLYWOOD DIAPHRAGM NAILED INTO (E) WALL TOP PLATE PER MANUFACTURER REQUIREMENTS. WHEN AT EDGE CONNECT TO (N) WALL PER DETAIL 4 / S-801. SPLICE STRAPS WITH MIN. 16" OVERLAP SPLICE
  - PROVIDE NEW STRAP CONNECTION BETWEEN EXISTING GLULAM BEAMS. REFER TO DETAIL 16 / S-801.
  - PROVIDE NEW FRAMING AT NEW FALL ARREST ANCHOR LOCATIONS. SEE DETAIL 6 / S-801 FOR ATTACHMENT TO STRUCTURE. APPROXIMATE LOCATION SHOWN - SEE ARCHITECTURAL PLANS FOR PRECISE FALL ARREST ANCHORS LOCATIONS.
  - FASTENERS FROM SKYLIGHT TO PRE-MANUFACTURED CURB BY OTHERS. ROOF CURB AT SKYLIGHTS PER ARCH. DRAWINGS. PROVIDE MIN. #10 x 2" SCREWS @ 12" O.C. AT ROOF CURB INTO ROOF FRAMING. INSTALL PER MFR RECOMMENDATIONS.

- LEGEND:**
- CONC. FOOTING OR GRADE BEAM
  - (E) CONC. FOOTING OR GRADE BEAM
  - (E) UNREINFORCED MASONRY BRICK WALL
  - (PH2) SHEAR WALL SHTG. S.W. MARK, SEE SCH. 1 / S-802 MIN. LENGTH
  - WD. OR STL. BEAM
  - METAL STRAP PER KEYNOTE 3
  - WD. COLUMN
  - WD. COLUMN (B)
  - HSS COLUMN
  - HSS COLUMN (B)
  - SIMP. 10D' HOLDDOWN EPOXY INTO EXISTING FOUNDATION UNLESS DEMO/REPLACEMENT FOUNDATION SPECIFIED BY KEYNOTE 2
  - PROVIDE (N) 1/2" PLYWOOD OVERLAY ON (E) 3/8" PLYWOOD SHEATHING. PROVIDE NAILING PER WOOD DIAPHRAGM SCHEDULE 5 / S-801.



STAMP  
**STRUCTURAL ENGINEER**  
 BEAVERTON, OREGON  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 11,701  
 BRITNEY B. EGANES  
 EXP. 12/31/2023

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**BEAVERTON SCHOOL DISTRICT**  
**MCKINLEY ELEMENTARY SCHOOL**  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



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 ■ PROJECT No. 22082.10  
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 ■ DRAWING TITLE  
**ROOF FRAMING**  
**PLAN - SECTOR 3**

■ SHEET NO.  
**S-161.3**

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**SHEET NOTES:**

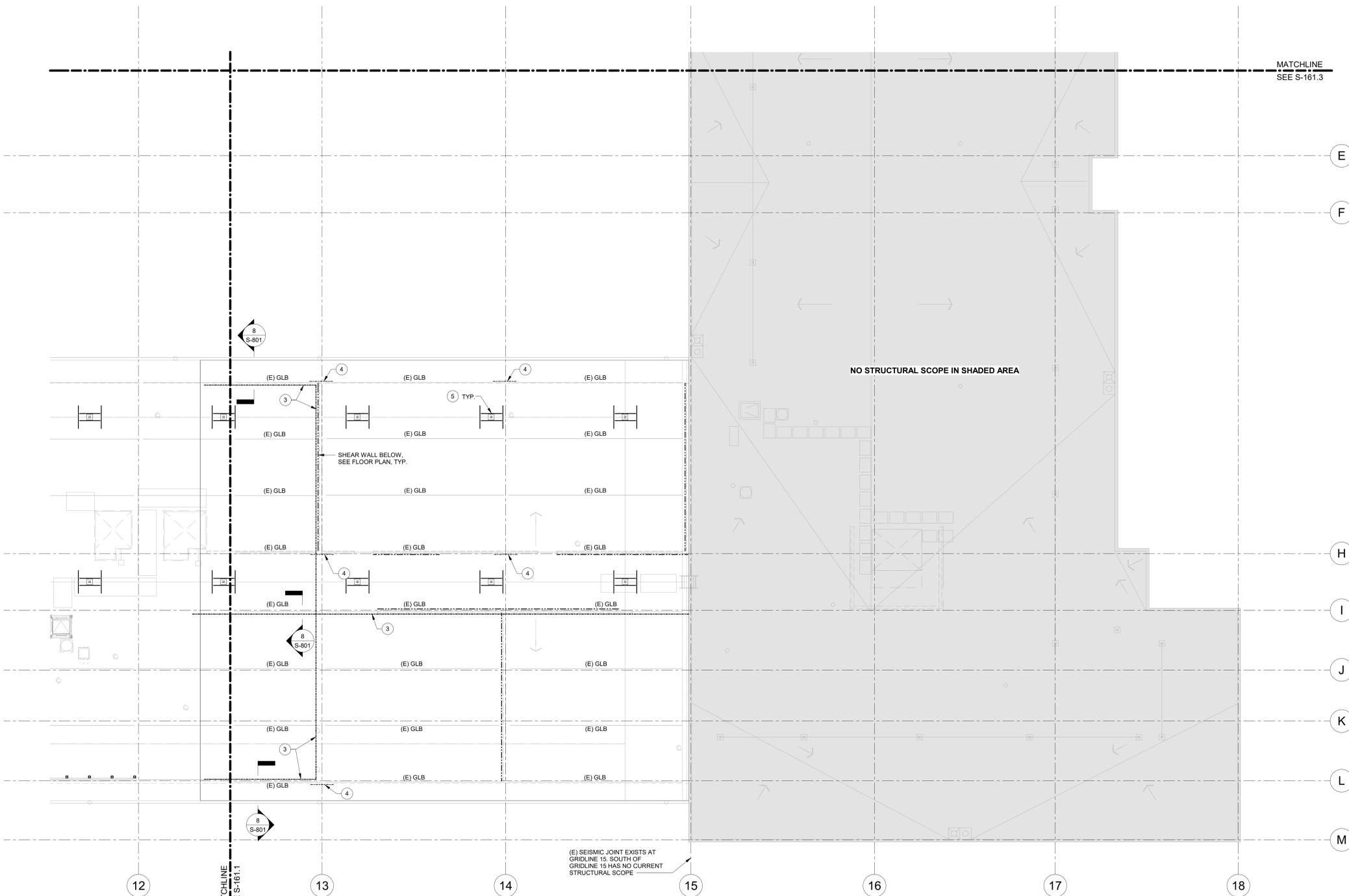
- SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND INFORMATION NOT SHOWN.
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**KEY NOTES:**

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- PROVIDE NEW STRAP CONNECTION BETWEEN EXISTING GLULAM BEAMS. REFER TO DETAIL 16 / S-801.
- PROVIDE NEW FRAMING AT NEW FALL ARREST ANCHOR LOCATIONS. SEE DETAIL 6 / S-801 FOR ATTACHMENT TO STRUCTURE. APPROXIMATE LOCATION SHOWN - SEE ARCHITECTURAL PLANS FOR PRECISE FALL ARREST ANCHORS LOCATIONS.
- FASTENERS FROM SKYLIGHT TO PRE-MANUFACTURED CURB BY OTHERS. ROOF CURB AT SKYLIGHTS PER ARCH. DRAWINGS. PROVIDE MIN. #10 x 2" SCREWS @ 12" O.C. AT ROOF CURB INTO ROOF FRAMING. INSTALL PER MFR RECOMMENDATIONS.

**LEGEND:**

- CONC. FOOTING OR GRADE BEAM
- (E) CONC. FOOTING OR GRADE BEAM
- (E) UNREINFORCED MANSORY BRICK WALL
- (PH2) SHEAR WALL SHTG. S.W. MARK, SEE SCH. 1 / S-802
- MIN. LENGTH
- WD. OR STL. BEAM
- METAL STRAP PER KEYNOTE 3
- WD. COLUMN
- WD. COLUMN (B)
- HSS COLUMN
- HSS COLUMN (B)
- SIMP. '1DU' HOLDDOWN EPOXY INTO EXISTING FOUNDATION UNLESS DEMO/REPLACEMENT FOUNDATION SPECIFIED BY KEYNOTE 2
- PROVIDE (N) 1/2" PLYWOOD OVERLAY ON (E) 3/8" PLYWOOD SHEATHING. PROVIDE NAILING PER WOOD DIAPHRAGM SCHEDULE 5 / S-801.



1 ROOF FRAMING PLAN SECTOR 4

1/8" = 1'-0"



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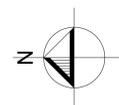
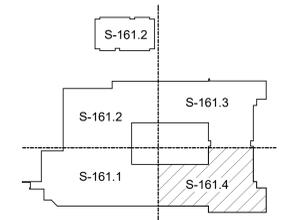
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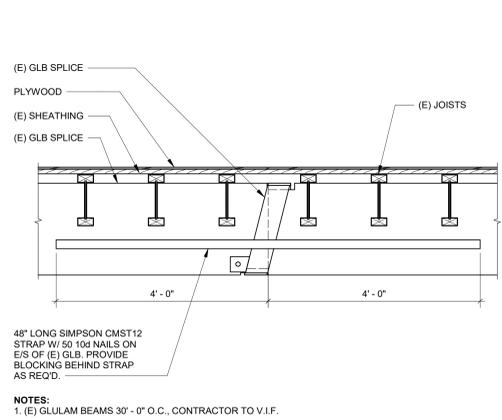
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■ SHEET NO.

S-161.4



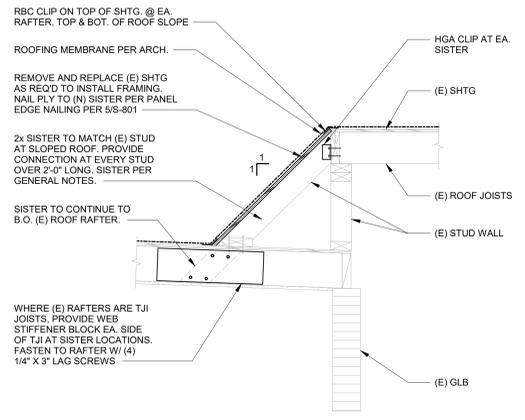
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48" LONG SIMPSON CMST12 STRAP W/ 50 10d NAILS ON E/S OF (E) GLB. PROVIDE BLOCKING BEHIND STRAP AS REQ'D.

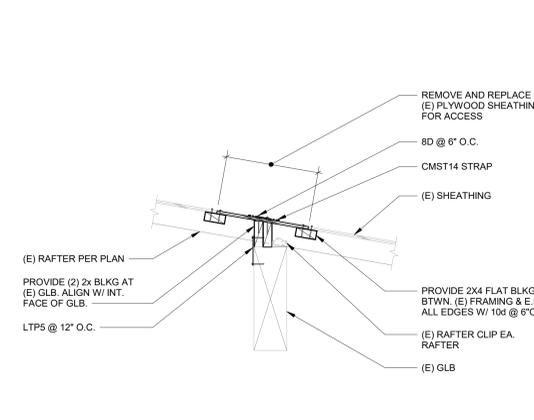
NOTES:  
1. (E) GLULAM BEAMS 30" - 0" O.C., CONTRACTOR TO V.I.F.

16 (E) GLB DRAG CONN. STRENGTHENING 3/4" = 1'-0"

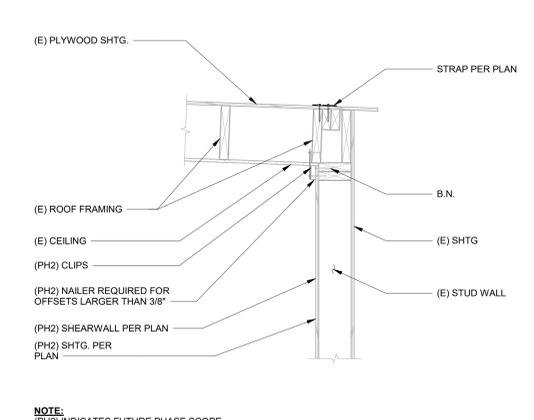


WHERE (E) RAFTERS ARE TJI JOISTS, PROVIDE WEB STIFFENER BLOCK EA. SIDE OF TJI AT SISTER LOCATIONS. FASTEN TO RAFTER W/ (4) 1/4" x 3" LAG SCREWS.

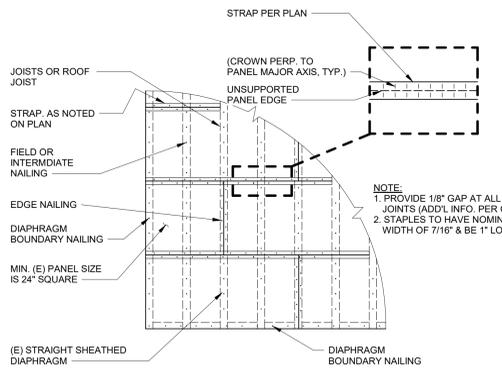
12 CONNECTION AT SLOPED ROOF 1" = 1'-0"



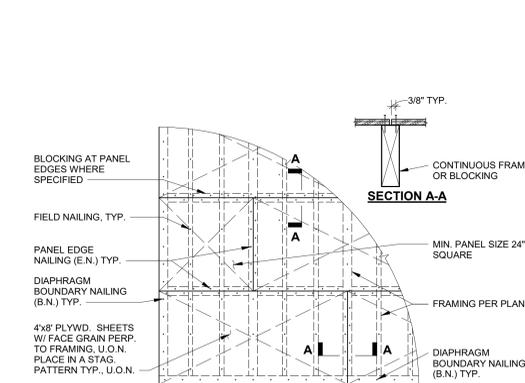
8 DIAPHRAGM STRAP AT (E) BEAM 1" = 1'-0"



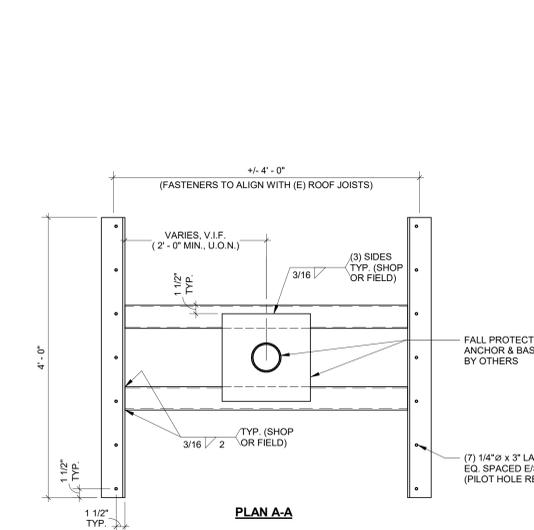
4 (N) STRAP TO (E) WALL DETAIL 1" = 1'-0"



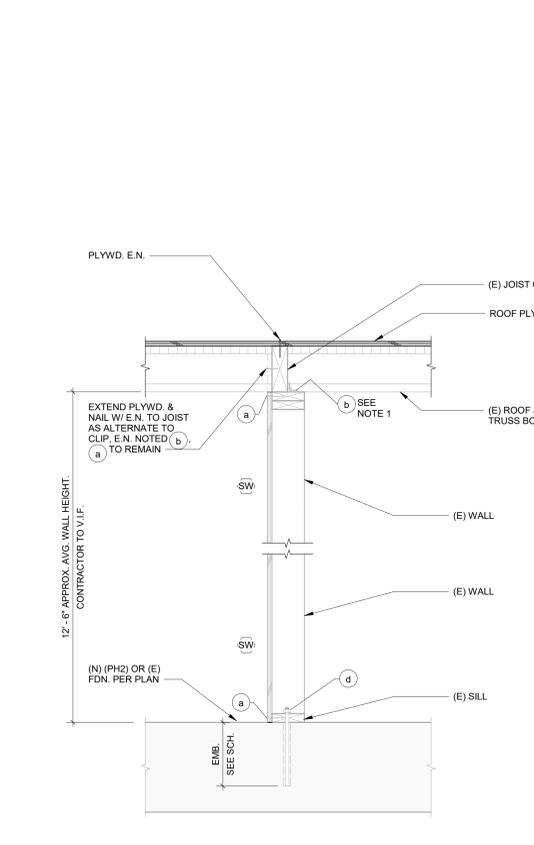
15 TYP PLYWD. DIAPHRAGM NAILING WITH STRAP BLOCKING N.T.S.



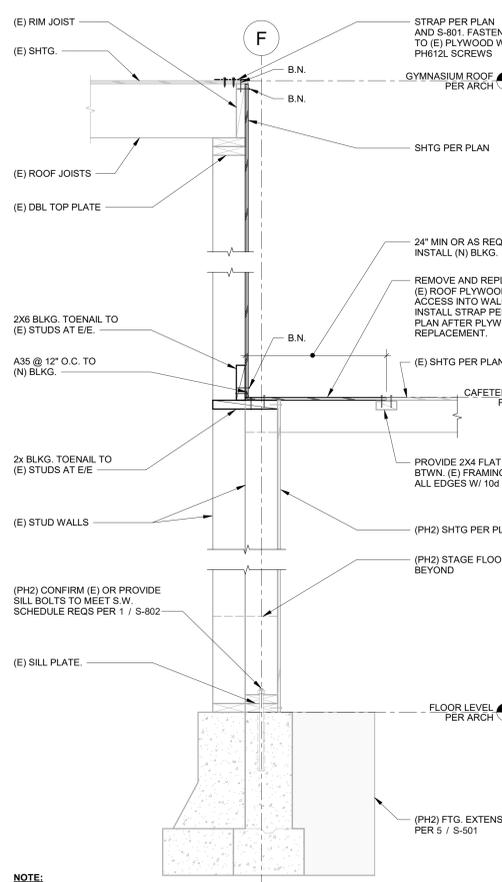
11 TYP. DIAPHRAGM N.T.S.



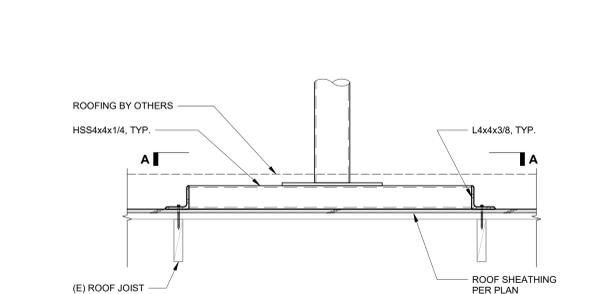
6 FALL PROTECTION ANCHOR CONNECTION AT WOOD FRAMING N.T.S.



2 TYPICAL (N) SHEAR WALL OVERLAY 1" = 1'-0"



13 GYMNASIUM / CAFETERIA WALL STRENGTHENING 1" = 1'-0"



5 WOOD DIAPHRAGM SCHEDULE N.T.S.

TAG	WOOD STRUCTURAL PANEL	BOUNDARY & CONT. EDGE NAILING	EDGE NAILING	FIELD NAILING	BLKG. & ATTACHMENTS	REF. DET.
D-1	1/2" PLYWOOD OVER (E) 3/8" PLYWOOD	8d @ 6" O.C.	8d @ 6" O.C.	8d @ 12" O.C.	NONE	11 / S-801

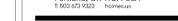
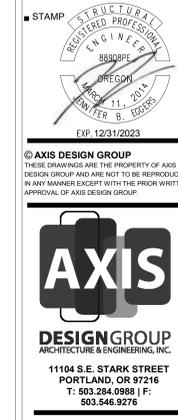
NOTES:  
1. PROVIDE MINIMUM FASTENERS PENETRATION TO MAIN FRAMING MEMBERS PER GENERAL NOTES.  
2. USE ZINC COATED RING-SHANK GUN NAILS AT EXTERIOR DECKS.  
3. PROVIDE SPAX UNDERLIE #8 x 1" LONG.  
4. PROVIDE LONGER NAILS WHERE (N) FRAMING CONNECTED TO THE (E) SHTG AND (N) PLYWD SHTG PER SCHEDULE. SEE DET. 1 / S-801  
5. PROVIDE MIN. 2" NOMINAL WIDTH OF NAILED FACE AT ADJOINING PANEL EDGES AND BOUNDARIES.

NOTE:  
1. CONNECTIONS INDICATED W/ LETTERS ARE DEFINED IN S.W. SEE SCH. 1 / S-801  
2. TOP OF WALL SLOPED TO MATCH ROOF LINE, TYP.  
3. (PH2) INDICATES FUTURE PHASE SCOPE

MARK	EDGE NAILING (E.N.) SEE NOTE 2	RIM CONN. SPACING (SIMP. A35, LTP4 OR L550)	FDN. ANCHOR SPACING. SEE NOTE 4
6	10d @ 6" O.C.	24" O.C.	48" O.C.
4	10d @ 4" O.C.	16" O.C.	48" O.C.
3	10d @ 3" O.C.	12" O.C.	32" O.C.

NOTES:  
1. USE 1/2" CDX PLYWD.  
2. E.N. ACROSS ALL PANEL EDGES; FIELD NAILING IS 12" O.C. ALL NAILS ARE COMMON WIRE NAILS. MAY USE 10d SHORTS (2 1/8" MIN. LENGTH) W/ FULL HEADS.  
3. ALL MEMBERS RECEIVING E.N. SHALL BE 3x AS A MIN. WHERE (E) STUDS ARE 2x STUDS, SISTER STUDS W/ 3x NAILING SHALL BE STAGGERED. EXCEPTION: WHERE NAIL SPACING IS 6" O.C. MEMBERS RECEIVING EDGE NAILING CAN BE 2x.  
4. CONTRACTOR TO VERIFY (E) SILL ANCHOR BOLTS MEET SIZE AND SPACING REQS PER THIS SCHEDULE, OR PROVIDE NEW SILL BOLTS. ALL FDN. ANCHOR BOLTS ARE 5/8" Ø L-BOLTS W/ A 2" HOOK OR ALL THREAD ROD WITH A NUT, WASHER AND NUT ON THE EMBEDDED END. WHEN SHEAR WALLS ARE LOCATED ON (E) CONCRETE 5/8" Ø ALL THREAD ROD WITH SIMPSON SET-XP EPOXY MAY BE USED. ANCHORS SHALL HAVE A MIN. EMBEDMENT OF 7" MIN. EDGE DISTANCE OF 1 3/4" AND SHALL HAVE A 3" SQ. x 3 GA. PLATE WASHER AT THE SILL. CONTRACTOR MAY USE BPSB-3 OR BPSB-3 SIMPSON WASHERS. PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING. WHERE WALL IS GREATER THAN 2x4 AND SHEATHING OCCURS ON BOTH SIDES, ANCHOR BOLTS SHALL BE STAGGERED. A.B. & WASHER SHALL BE HOT DIPPED GALVANIZED.

1 SHEAR WALL SCHEDULE N.T.S.



ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
 BEAVERTON SCHOOL DISTRICT  
 MCKINLEY ELEMENTARY SCHOOL  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



NO.	DESCRIPTION	DATE

■ DRAWN: CJC  
 ■ CHECKED BY: ENS  
 ■ PROJECT No.: 22082.10  
 ■ DATE: 07/08/2022  
 ■ ISSUED FOR: BID | PERMIT  
 ■ DRAWING TITLE: WOOD FRAMING DETAILS  
 ■ SHEET NO.:

S-801

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REVISIONS

No.	Description	Date

DRAWN BY: EVS  
CHECKED BY: SEE  
JOB NO: 22-002 BSD MKEs  
DATE: 07/08/2022  
ISSUED FOR: BID | PERMIT  
SHEET TITLE  
ROOF PLAN  
SHEET NO.

ROOF PLAN KEY NOTES

- NOT ALL NOTES MAY BE USED.
- INSTALL NEW SHEATHING OVERLAY PER STRUCTURAL. INSTALL TO EDGE OF MECHANICAL EQUIPMENT AND ELECTRICAL ITEMS.
  - REMOVE ROOFING (E) ROOF PLYWOOD TO ALLOW ACCESS TO ROOF FRAMING PER STRUCTURAL.
  - REMOVE AND REPLACE (E) ROOF PLYWOOD TO ALLOW ACCESS INTO WALL FRAMING. ALLOW FOR 2" OF REPLACEMENT STRIP PER STRUCTURAL. INSTALLED AFTER PLYWOOD REPLACEMENT.
  - DEMOLISH EXTERNAL VERTICAL WOOD SIDING AND BATT INSULATION TO ACCESS TO WALL FRAMING PER STRUCTURAL. PROVIDE NEW INSULATION, SHEATHING, WEATHER BARRIER, AND EXTERIOR VERTICAL WOOD SIDING.
  - DEMO (E) ROOF LADDER.
  - REMOVE AND REPLACE EXTERIOR VERTICAL WOOD SIDING, SHEATHING, AND BATT INSULATION AS REQUIRED. PAINT TO MATCH EXISTING.
  - INSTALL (N) GALV. OSHA APPROVED LADDER. ADD HORIZONTAL 4X6 FLAT BLOCKING BETWEEN WALL FRAMING AT ALL ANCHOR LOCATIONS PER STRUCTURAL.
  - CLEAN ROOF/OVERFLOW DRAIN BODIES AND ROOF DOME ASSEMBLIES. RESET ROOF DOME WITH NEW ROOFING ASSEMBLY.
  - PROVIDE AND INSTALL (N) SAFETY GUARDRAIL WITH GATE.
  - DEMO (E) ROOF TOP CABLE FALL PROTECTION SYSTEM.
  - (E) LADDER TO REMAIN

- DEMO (E) LOW VOLTAGE CABLE MAST AND GUY WIRE SYSTEM AND CURBS. DESIGN-BUILD (N) UNISTRUT CABLE MAST, GUY WIRE SYSTEM AND SUPPORT POSTS (THAYER ARS-300) TO ACCOMMODATE ADDED ROOF INSUL. PROVIDE (N) PIPE FLASHING AT POSTS. SEE DETAIL 12/A-511 TYP.
- DEMO (E) VERT UNISTRUTS W/ BASE ATTACHED TO (E) HORIZ UNISTRUTS FRAMED OFF (E) RTU. PROVIDE (N) VERT UNISTRUTS W/ POLYCARBONATE BASE TO ACCOMMODATE ADDED ROOF INSULATION
- DEMO (E) ELECT PANEL UNISTRUT SUPPORTS AND CURBS. DESIGN-BUILD (N) UNISTRUT SUPPORT WITH (N) CURB, PIPE AND UNISTRUT FLASHING TO ACCOMMODATE ADDED ROOF INSULATION
- CUT AND CAP ABANDONED GAS LINES BELOW ROOF LEVEL PER MEP. REMOVE (E) CURB AND PATCH ROOF AS REQUIRED FOR (N) ROOFING ASSEMBLY
- CONFIRM WITH DISTRICT IF ELECT ROOF STACK AND CAP HAS BEEN ABANDONED. CUT AND CAP LOW VOLTAGE CABLING BELOW ROOF LEVEL PER MEP. REMOVE (E) STACK AND PATCH ROOF AS REQUIRED FOR (N) ROOFING ASSEMBLY
- DEMO (E) ELECT. ROOF STACK AND CAP FOR (E) LOW VOLTAGE CABLING. PROVIDE (N) ROOF STACK AND CAP TO ACCOMMODATE ADDED ROOF INSULATION
- CONFIRM WITH DISTRICT IF MECH. ROOF SCUTTLE HAS BEEN ABANDONED. CUT AND CAP MEP SYSTEMS BELOW ROOF LEVEL PER MEP. REMOVE (E) CURB AND PATCH ROOF AS REQUIRED FOR (N) ROOFING ASSEMBLY
- DISCONNECT (2) A/C UNITS. DEMO (E) ELECT. A/C LINE SHACK, PIPE BOX. PROVIDE (N) A/C LINE SHACK, PIPE BOX TO ACCOMMODATE ADDED ROOF INSULATION. RECONNECT A/C UNITS PER MEP.
- (N) 20 GA. PRE-FIN GALV. EXPANSION JOINT FLASHING & COUNTERFLASHING, MATCH (E) PROFILE.

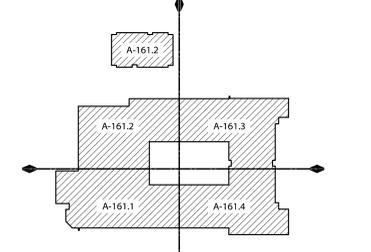
ROOF PLAN SHEET NOTES

- ROOF PLAN FOR GENERAL PURPOSE ONLY.
- INFORMATION RELATING TO THE EXISTING BUILDING IS BASED ON CASUAL OBSERVATION ACTUAL CONDITIONS VERY AND SHELL BE FIELD VERIFIED BY THE CONTRACTOR.
- GRAPHIC PRESENTATION OF THE AFFECTED AREAS ON DRAWINGS MAY BE SMALLER OR LARGER THAN INDICATED.
- ONLY MAJOR ELEMENTS ARE SHOWN.
- ROOF AREA SHOWN ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF AREAS FOR BIDDING AND CONSTRUCTION PURPOSES.
- MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION IS BASED ON TABLE 1501.1 IN CHAPTER 15 ROOF ASSEMBLIES FOR SPECIFIED ROOF TOP STRUCTURES. ROOFING REPLACEMENT ASSEMBLIES ARE CLASS A.
- CONTRACTOR RESPONSIBLE FOR THE DISCONNECTION AND RECONNECTION OF ALL UTILITY CONNECTIONS AS REQ'D TO COMPLETE WORK. THIS INCLUDES ANY WORK REQ'D TO EXTEND PIPES, WIRES, ETC. TO MEET MIN. CLEARANCES.
- THE VENT AND PIPE SIZES NOTED ON THE DRAWINGS ARE APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY WORK.
- ROOF CANNOT BE LEFT UNPROTECTED FROM THE ELEMENTS FOR A WEEKEND OR HOLIDAY PERIOD. CONTRACTOR MAY LEAVE ROOF UNPROTECTED OVERNIGHT AND ASSUMES ALL RISK FOR ANY DAMAGE CAUSED.
- CONTRACTOR TO PROVIDE SITE CLEANUP AT THE END OF EACH WORK DAY. CLEANUP SHALL INCLUDE A MAGNET/METAL DETECTOR FOR ALL HARD SURFACES WITHIN 15 FEET OF BUILDING AND ALL LANDSCAPED AREAS.
- REMOVE EXISTING ROOFING DOWN TO EXISTING SHEATHING UNLESS OTHERWISE NOTED IN ASSEMBLY A OR A.1. REMOVE AND DISPOSE OF ROOFING AS REQ'D BY GOVERNING AUTHORITIES.
- REPLACE EXISTING ROOF SYSTEM DAMAGED FROM WATER INTRUSION AS REQ'D FOR NEW SCOPE OF WORK INCLUDING, BUT NOT LIMITED TO, SHEATHING, CURBS, BLOCKING, FLASHING, ETC.
- FOR ADDITIONAL GENERAL DEMOLITION INFORMATION SEE NO. 6 UNDER GENERAL NOTES ON SHEET G-001.
- CONTACT DISTRICT MAINTENANCE BEFORE REMOVING OR RELOCATING ANY ELECTRICAL CONDUIT OR CABLE FROM THE ROOF.

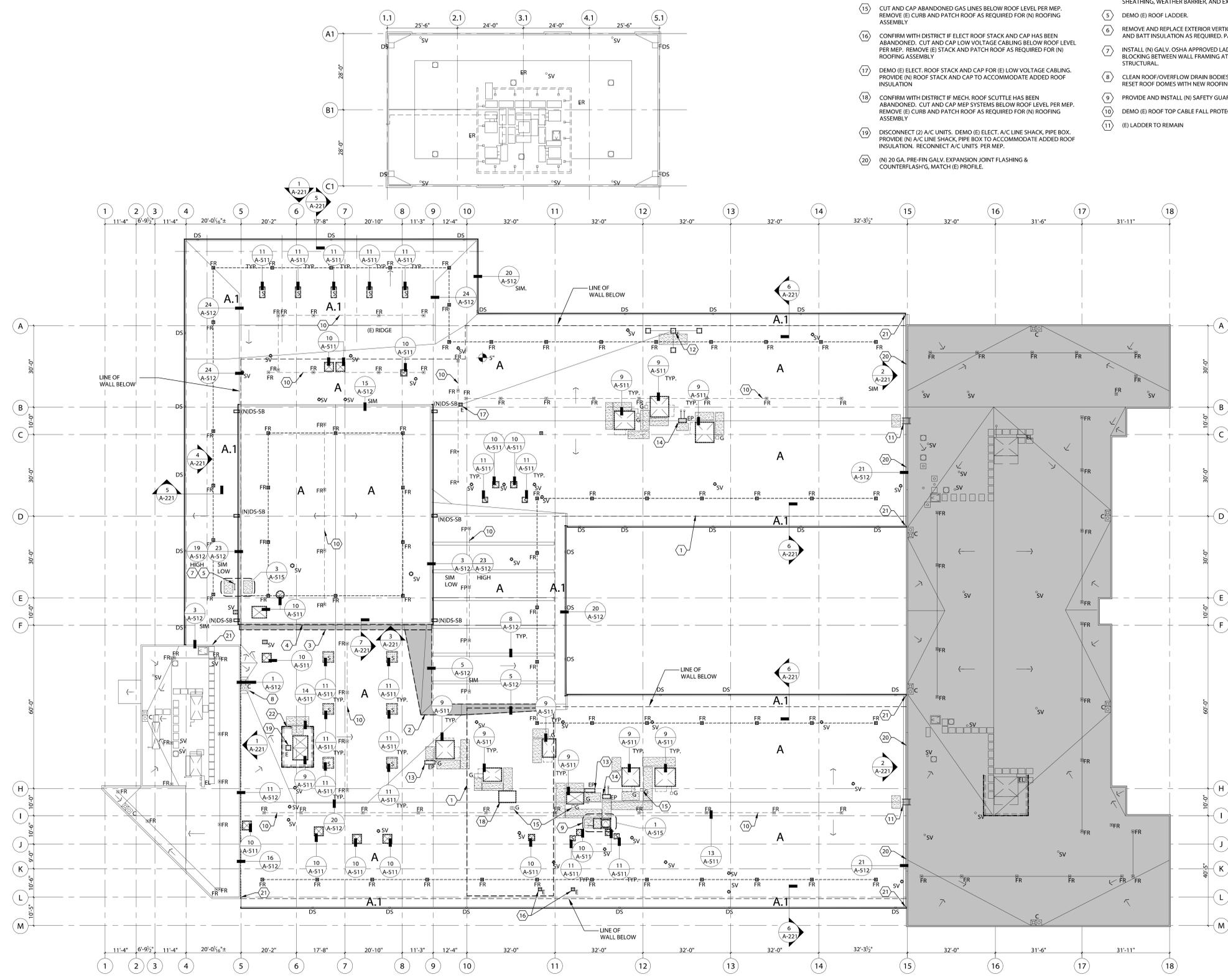
ROOF PLAN LEGEND (MCKINLEY ES)

NOT ALL SYMBOLS MAY BE USED. SIZES AND PROPORTIONS OF ELEMENTS MAY VARY FROM WHAT IS ILLUSTRATED IN LEGEND.

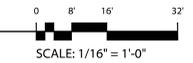
- A.1 (N) LOW-SLOPE ROOF - BUILT-UP ROOF ASSEMBLY WITH 2" RIGID INSULATION
- A (N) LOW-SLOPE ROOF - BUILT-UP ROOF ASSEMBLY WITH R-30 (5.20") RIGID INSULATION
- A.1 (N) TAPER INSULATION OVER 2" RIGID INSULATION AS REQUIRED
- AREA OF BUILDING NOT IN SCOPE
- VB/C CONSTRUCTION TYPE/FIRE CLASSIFICATION
- (N) WALKING PAD
- (E) ROOF ACCESS HATCH
- (N) PRE-FAB INSUL METAL CURB MOUNTED FIXED DOME SKYLIGHT, WITH THERMALLY BROKEN ALUM FRAME, CAST ACRYLIC GLAZING, AND FALL PROTECTION CAGE
- (E) FALL RESTRAINT ANCHOR POSTS
- (N) FALL RESTRAINT ANCHOR POSTS AS PART OF SINGLE POINT TIE-OFF DESIGN BUILD SYSTEM. SEE DETAIL 13/A-511 TYP.
- (E) ROOFTOP MECHANICAL UNIT. DISCONNECT, LIFT RTU AND PROVIDE (N) STRUCTURAL BLOCKING TO ACCOMMODATE ADDED ROOF INSUL. FLASH AND RESET (E) MECH CURB UNIT. RECONNECT RTU PER MEP. REMOVE PIPE PENETRATION CURB AT GAS LINES TO REMAIN. PROVIDE NEW PIPE FLASHING DETAIL AND SHUTOFF VALVE PER MEP.
- (E) MECHANICAL DISCONNECT, LIFT MECH AND PROVIDE (N) CURB TO ACCOMMODATE ADDED ROOF INSUL. FLASH AND RESET (E) MECH. RECONNECT MECH PER MEP
- SV SV (E) STACK VENT. PROVIDE EXTENSIONS AND FLASHING TO ACCOMMODATE ADDED ROOF INSUL. REMOVE CURBS WHERE THEY OCCUR AND PROVIDE (N) PIPE FLASHING DETAIL. TYP. SEE 8/A-511
- RD (E) ROOF DRAIN
- OD (E) OVERFLOW DRAIN
- C (E) COMBINATION MAIN ROOF & OVERFLOW DRAIN
- DS (N) GUTTER WITH LEAFGUARD. PROVIDE (N) LEADER TO (E) VERT WALL MOUNTED DOWNSPOUT TO REMAIN
- (N) GUTTER WITH LEAF GUARD AND DOWNSPOUT. PROVIDE (N) SPLASH BLOCK
- (N) COPING
- EP (E) ELECT ITEMS. PROVIDE (N) CURBS, PIPE AND PENETRATION FLASHING TO ACCOMMODATE ADDED ROOF INSULATION
- LF (E) LIGHT FIXTURE
- (E) ROOF SLOPE DIRECTION
- (E) GALV STEEL MECH SCREEN FRAME W/ PRE-FINISHED METAL PANEL - CLEAN, RESEAL AND PAINT



- (N) PRE-FINISHED SHEET METAL COUNTER FLASHING.
- LIFT THE EXISTING MECHANICAL SCREEN TO & BOTTOM UNISTRUT TO 8" CLR ABOVE NEW ROOFING SYSTEM. SECURE TO EXISTING PIPE COLUMNS AS REQ'D FOR NEW WORK.



1 ROOF PLAN  
SCALE: 1/16" = 1'-0"



KEY PLAN  
SCALE: NOT TO SCALE

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ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
BEAVERTON SCHOOL DISTRICT  
MCKINLEY ELEMENTARY SCHOOL  
1500 NW 185TH AVE.  
BEAVERTON, OR 97006



REVISIONS

No.	Description	Date

DRAWN BY: EVS  
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JOB NO: 22-002 BSD MKEs  
DATE: 07/08/2022  
ISSUED FOR: BID | PERMIT  
SHEET TITLE  
ROOF PLAN - ASSEMBLY AREAS  
SHEET NO.

A-161.1

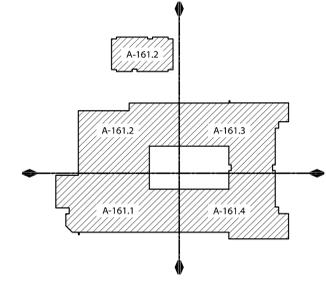
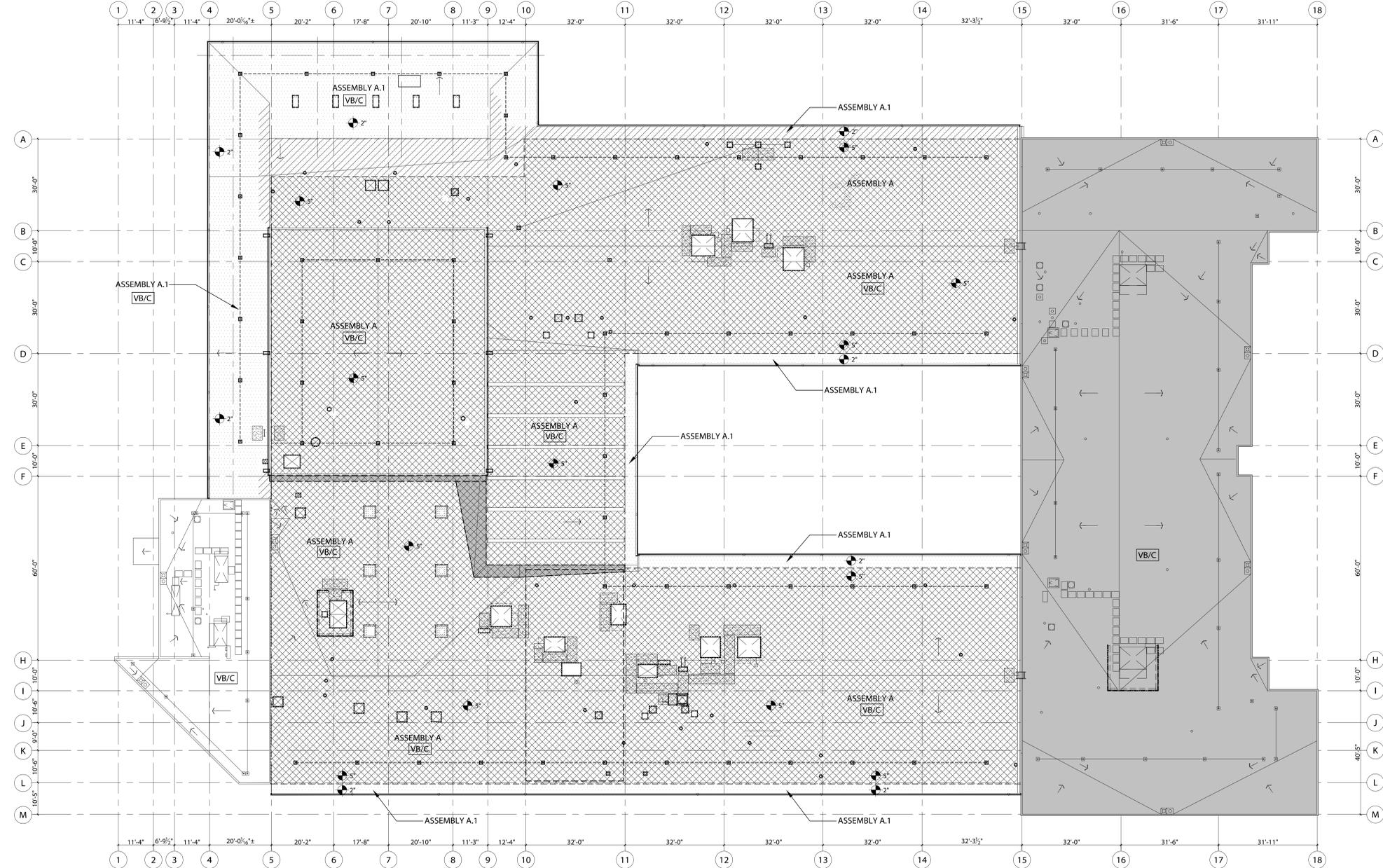
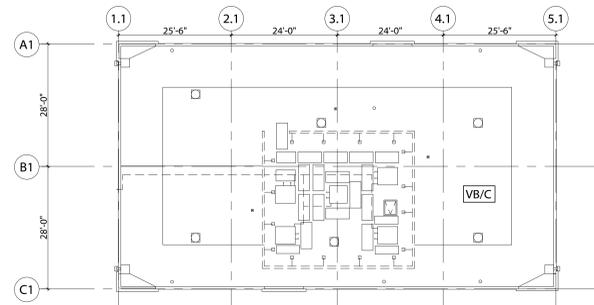
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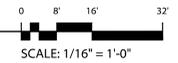
ROOF PLAN LEGEND (MCKINLEY ES)

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- (N) TAPER INSULATION OVER 2" RIGID INSULATION AS REQUIRED
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- (N) WALKING PAD
- (E) ROOF ACCESS HATCH.
- (N) PRE-FAB INSUL METAL CURB MOUNTED FIXED DOME SKYLIGHT, WITH THERMALLY BROKEN ALUM FRAME, CAST ACRYLIC GLAZING, AND FALL PROTECTION CAGE
- FR DEMO (E) FALL RESTRAINT ANCHOR POSTS
- (N) FALL RESTRAINT ANCHOR POSTS AS PART OF SINGLE POINT TIE-OFF DESIGN BUILD SYSTEM. SEE DETAIL 13/A-911 TYP.
- (E) ROOFTOP MECHANICAL UNIT. DISCONNECT, LIFT RTU AND PROVIDE (N) STRUCTURAL BLOCKING TO ACCOMMODATE ADDED ROOF INSUL. FLASH AND RESET (E) MECH CURB/UNIT. RECONNECT RTU PER MEP. REMOVE PIPE PENETRATION CURBS AT GAS LINES TO REMAIN. PROVIDE NEW PIPE FLASHING DETAIL AND SHUTOFF VALVE PER MEP.
- (E) MECHANICAL DISCONNECT, LIFT MECH AND PROVIDE (N) CURB TO ACCOMMODATE ADDED ROOF INSUL. FLASH AND RESET (E) MECH. RECONNECT MECH PER MEP
- SVO SV (E) STACK VENT. PROVIDE EXTENSIONS AND FLASHING TO ACCOMMODATE ADDED ROOF INSUL. REMOVE CURBS WHERE THEY OCCUR AND PROVIDE (N) PIPE FLASHING DETAIL. TYP. SEE B/A-511
- RD (E) ROOF DRAIN
- OD (E) OVERFLOW DRAIN
- C (E) COMBINATION MAIN ROOF & OVERFLOW DRAIN
- DS (N) GUTTER WITH LEAF GUARD. PROVIDE (N) LEADER TO (E) VERT WALL MOUNTED DOWNSPOUT TO REMAIN
- (N) GUTTER WITH LEAF GUARD AND DOWNSPOUT. PROVIDE (N) SPLASH BLOCK
- (N) COPING
- EP (E) ELEC ITEMS. PROVIDE (N) CURBS, PIPE AND PENETRATION FLASHING TO ACCOMMODATE ADDED ROOF INSULATION
- LF (E) LIGHT FIXTURE
- (E) ROOF SLOPE DIRECTION
- (E) GALV STEEL MECH SCREEN FRAME W/ PRE-FINISHED METAL PANEL - CLEAN, RESEAL AND PAINT



1 ROOF PLAN - ASSEMBLY AREAS  
SCALE: 1/16" = 1'-0"



KEY PLAN  
SCALE: NOT TO SCALE

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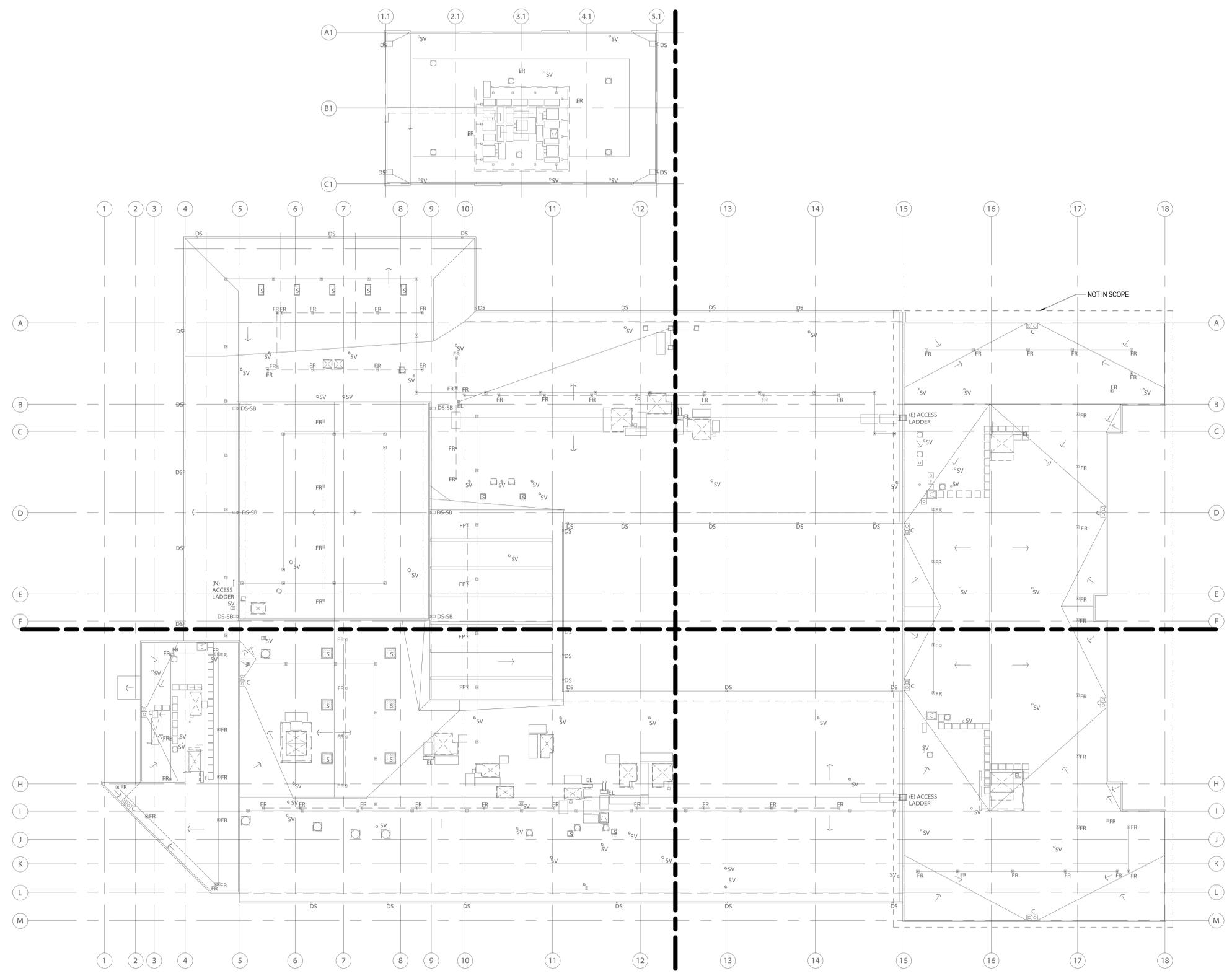
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**GENERAL NOTES:**

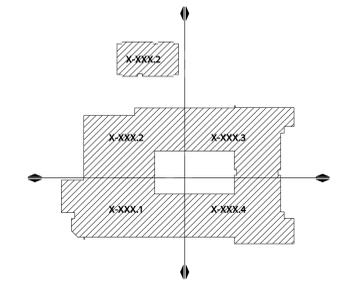
- A. CONTRACTOR TO PROVIDE ADEQUATE SEISMIC BRACING PER ASCE 7 CHAPTER 13 TO EQUIPMENT INDICATED ON THESE DRAWINGS.
- B. CONTRACTOR TO REFER TO ASCE 7 CHAPTER 13 FOR ADDITIONAL MECHANICAL SYSTEMS BRACING CRITERIA.

**NOTES:**

- 1. REMOVE EXISTING ROOFTOP UNIT TIE DOWNS AND REPLACE WITH THE DOWNS RATED FOR SEISMIC DESIGN CATEGORY 1.
- 2. PROVIDE FLEXIBLE DUCT CONNECTION AT ALL DUCT CONNECTION TO ROOFTOP EQUIPMENT.
- 3. PROVIDE FLEXIBLE PIPE CONNECTOR AT ALL NATURAL GAS CONNECTIONS.
- 4. NATURAL GAS PIPING ROUTED EXPOSED ON ROOF WILL REQUIRE SEISMIC RESTRAINT.



1 OVERALL ROOF PLAN - MECHANICAL  
 1/16" = 1'-0"



KEY PLAN  
 SCALE: NOT TO SCALE

**ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS**  
 BEAVERTON SCHOOL DISTRICT  
 MCKINLEY ELEMENTARY SCHOOL  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



REVISIONS

NO.	REVISION	DATE

DRAWN BY: Author  
 CHECKED BY: Checker  
 JOB NO: 22-002 BSD MKES  
 DATE: 07/08/22  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 OVERALL ROOF PLAN - MECHANICAL

SHEET NO.

M-161

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ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
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DRAWN BY: Author  
CHECKED BY: Checker  
JOB NO: 22-002 BSD MKES  
DATE: 07/08/22  
ISSUED FOR: BID | PERMIT  
SHEET TITLE  
ENLARGED ROOF PLAN -  
SECTOR 1 - MECHANICAL

SHEET NO.

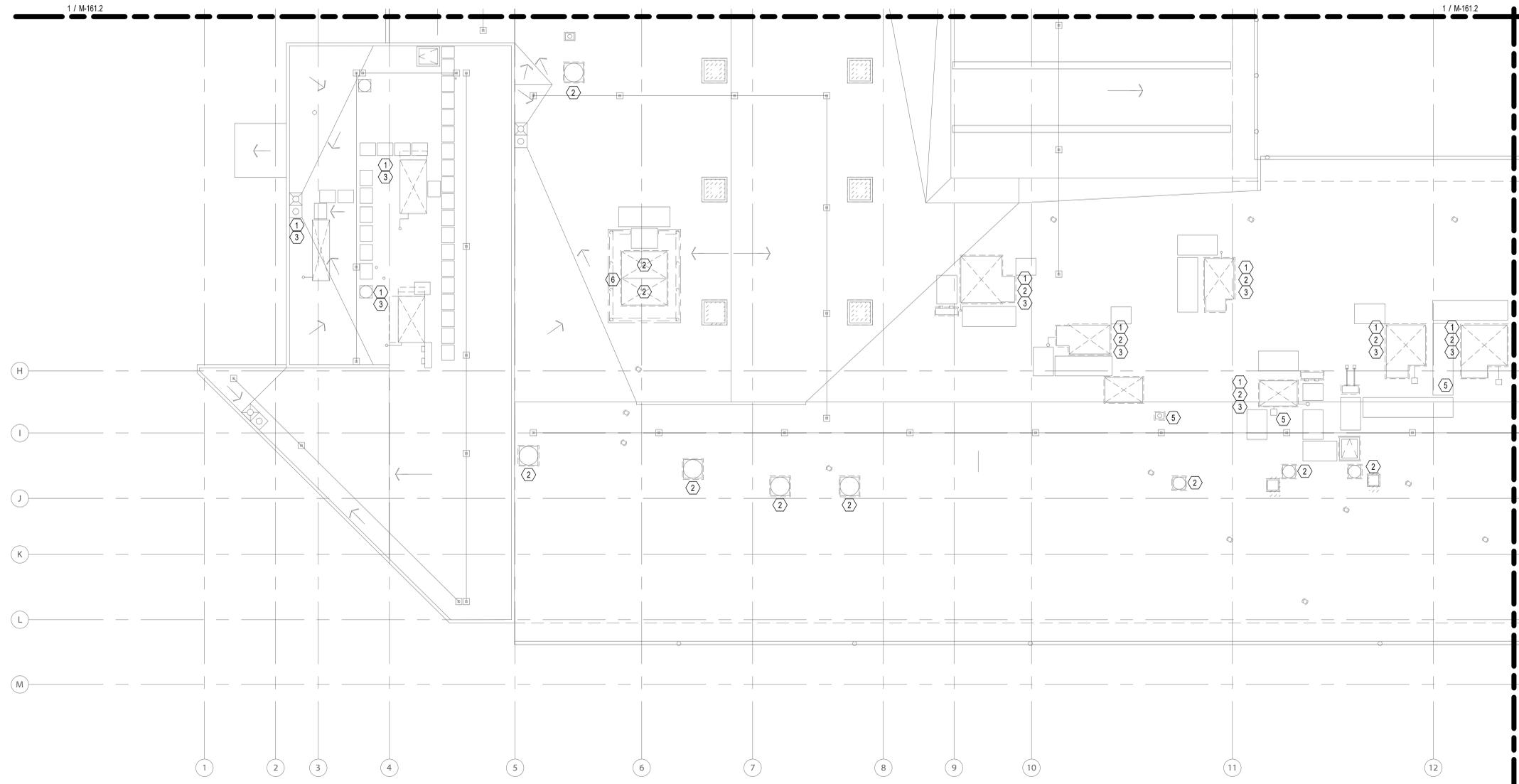
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**GENERAL NOTES:**

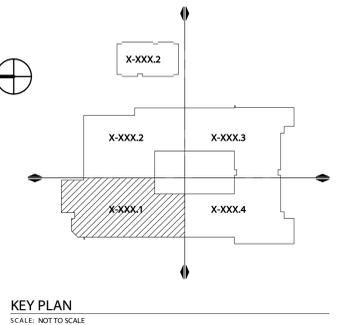
- A. CONTRACTOR TO PROVIDE ADEQUATE SEISMIC BRACING PER ASCE 7 CHAPTER 13 TO EQUIPMENT INDICATED ON THESE DRAWINGS.
- B. CONTRACTOR TO REFER TO ASCE 7 CHAPTER 13 FOR ADDITIONAL MECHANICAL SYSTEMS BRACING CRITERIA.
- C. EXTEND ALL PLUMBING VENTS ABOVE NEW INSULATION AS NEEDED.

**NOTES:**

- 1. REMOVE EXISTING ROOFTOP UNIT TIE DOWNS REPLACE WITH NEW TIE DOWNS RATED FOR SEISMIC DESIGN CATEGORY 1. SEE SPECIFICATIONS.
- 2. EXISTING MECHANICAL EQUIPMENT TO BE TEMPORARILY REMOVED TO ACCOMMODATE NEW STRUCTURAL BLOCKING. REINSTALL WITH FLEXIBLE DUCT CONNECTION(S).
- 3. PROVIDE NEW PIPE FLASHING FOR EXISTING GAS PIPING THRU ROOF. PROVIDE NEW SHUT OFF VALVE AND FLEXIBLE PIPE CONNECTOR AT ALL NATURAL GAS CONNECTIONS.
- 4. NATURAL GAS PIPING ROUTED EXPOSED ON ROOF PROVIDE SEISMIC RESTRAINT.
- 5. CUT AND CAP ABANDONED GAS LINES BELOW ROOF.
- 6. REMOVE EXISTING REFRIGERANT PIPING SHROUD TO ALLOW FOR NEW INSULATION. PROVIDE NEW PIPE SLEEVES AND FLASHING FOR EXISTING PIPING.



1 ENLARGED ROOF PLAN - SECTOR 1 - MECHANICAL  
1/8" = 1'-0"



KEY PLAN  
SCALE: NOT TO SCALE

Plot Date: May 23 22 © Time: 2:09 PM

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REVISIONS

NO.	REVISION	DATE

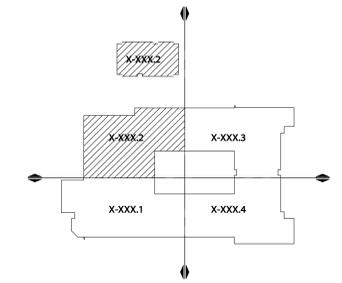
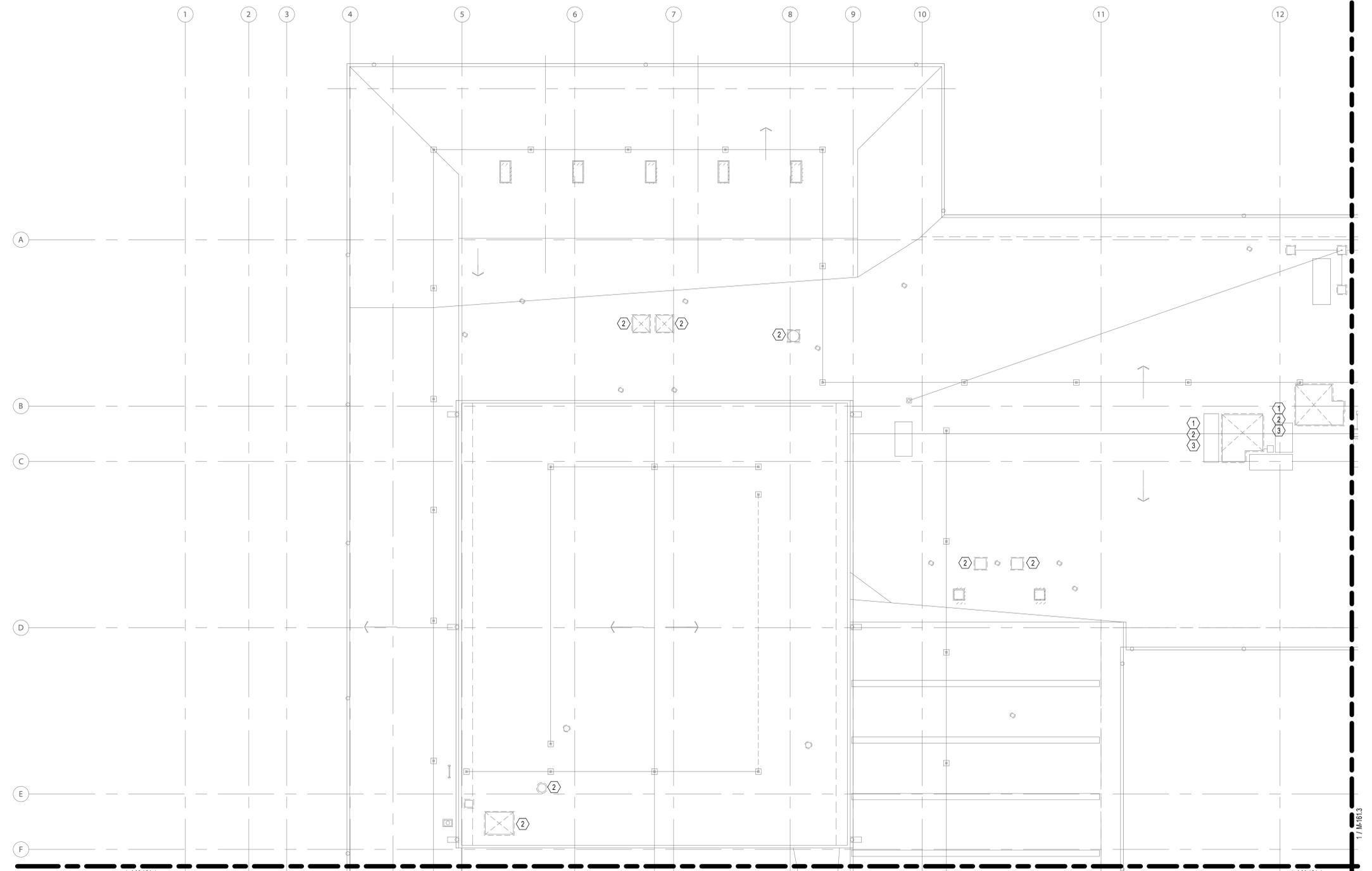
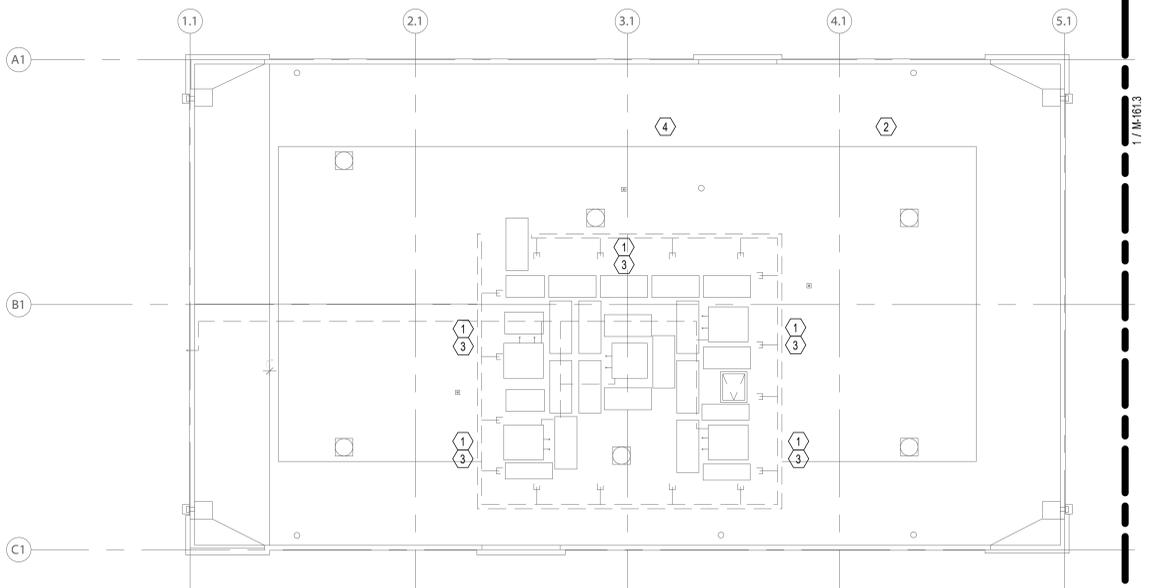
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JOB NO: 22-02 BSD MKES  
DATE: 07/08/22  
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SHEET TITLE  
ENLARGED ROOF PLAN -  
SECTOR 2 - MECHANICAL

SHEET NO.

M-161.2

- GENERAL NOTES:**
- A. CONTRACTOR TO PROVIDE ADEQUATE SEISMIC BRACING PER ASCE 7 CHAPTER 13 TO EQUIPMENT INDICATED ON THESE DRAWINGS.
  - B. CONTRACTOR TO REFER TO ASCE 7 CHAPTER 13 FOR ADDITIONAL MECHANICAL SYSTEMS BRACING CRITERIA.

- NOTES:**
- 1. REMOVE EXISTING ROOFTOP UNIT TIE DOWNS. REPLACE WITH NEW TIE DOWNS RATED FOR SEISMIC DESIGN CATEGORY 1. SEE SPECIFICATIONS.
  - 2. EXISTING MECHANICAL EQUIPMENT TO BE TEMPORARILY REMOVED TO ACCOMMODATE NEW STRUCTURAL BLOCKING. REINSTALL WITH FLEXIBLE DUCT CONNECTION(S).
  - 3. PROVIDE NEW PIPE FLASHING FOR EXISTING GAS PIPING THRU ROOF. PROVIDE NEW SHUT OFF VALVE AND FLEXIBLE PIPE CONNECTOR AT ALL NATURAL GAS CONNECTIONS.

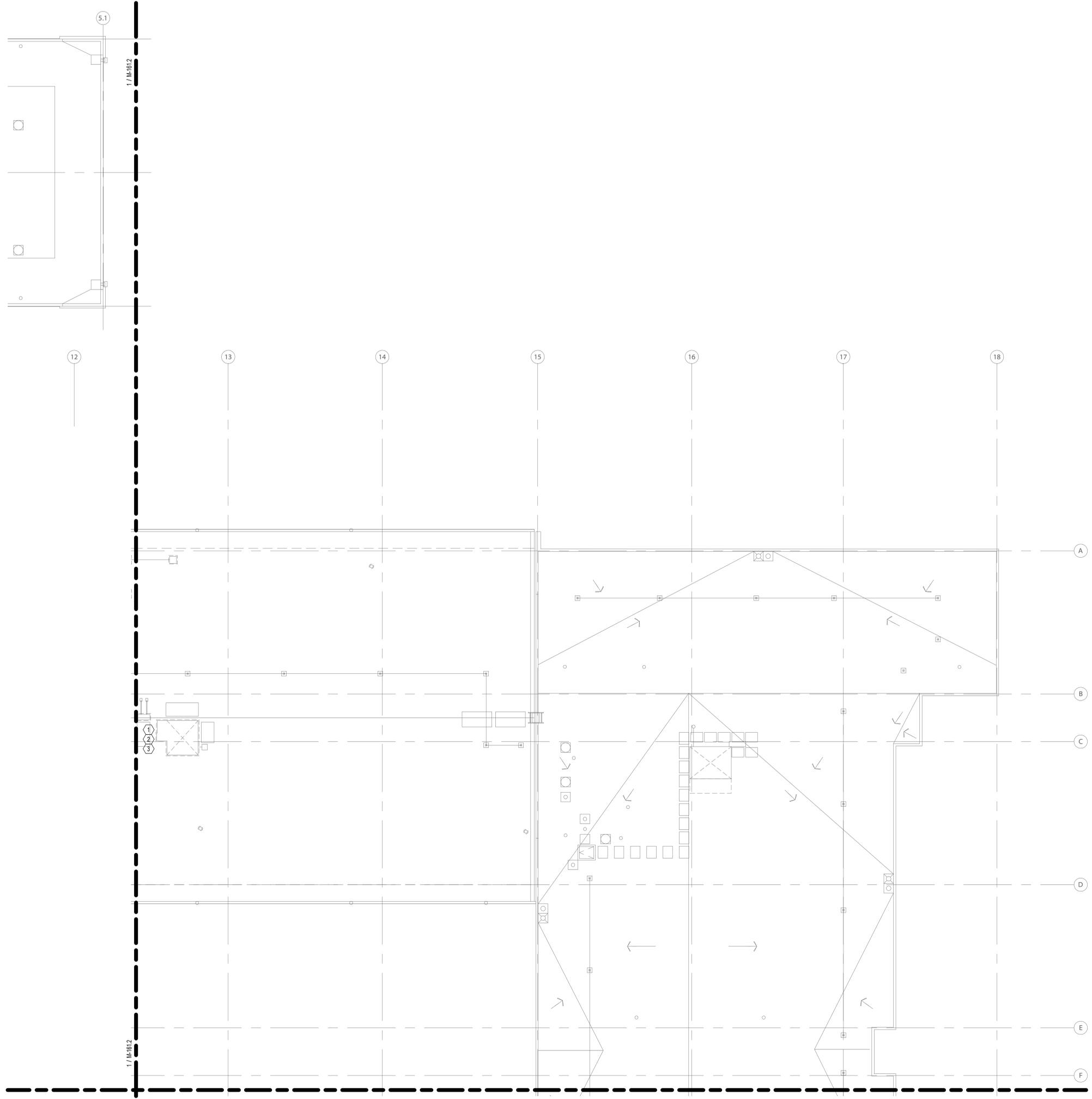


KEY PLAN  
SCALE: NOT TO SCALE

1 ENLARGED ROOF PLAN - SECTOR 2 - MECHANICAL  
1/8" = 1'-0"

Plot Date: May 23 22 © Time: 2:09 PM

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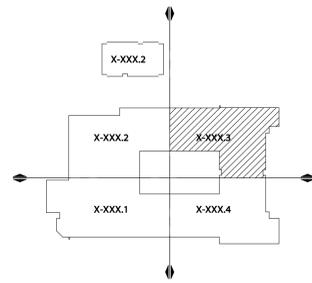
1 ENLARGED ROOF PLAN - SECTOR 3 - MECHANICAL  
1/8" = 1'-0"

**GENERAL NOTES:**

- A. CONTRACTOR TO PROVIDE ADEQUATE SEISMIC BRACING PER ASCE 7 CHAPTER 13 TO EQUIPMENT INDICATED ON THESE DRAWINGS.
- B. CONTRACTOR TO REFER TO ASCE 7 CHAPTER 13 FOR ADDITIONAL MECHANICAL SYSTEMS BRACING CRITERIA.

**NOTES:**

- 1. REMOVE EXISTING ROOFTOP UNIT TIE DOWNS. REPLACE WITH NEW TIE DOWNS RATED FOR SEISMIC DESIGN CATEGORY 1. SEE SPECIFICATIONS.
- 2. EXISTING MECHANICAL EQUIPMENT TO BE TEMPORARILY REMOVED TO ACCOMMODATE NEW STRUCTURAL BLOCKING. REINSTALL WITH FLEXIBLE DUCT CONNECTION(S).
- 3. PROVIDE NEW PIPE FLASHING FOR EXISTING GAS PIPING THRU ROOF. PROVIDE NEW SHUT OFF VALVE AND FLEXIBLE PIPE CONNECTOR AT ALL NATURAL GAS CONNECTIONS.



KEY PLAN  
SCALE: NOT TO SCALE



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**ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS**  
**BEAVERTON SCHOOL DISTRICT**  
**MCKINLEY ELEMENTARY SCHOOL**  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006



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NO.	REVISION	DATE

DRAWN BY: Author  
 CHECKED BY: Checker  
 JOB NO: 22-002 BSD MKES  
 DATE: 07/08/22  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 ENLARGED ROOF PLAN - SECTOR 3 - MECHANICAL

SHEET NO.

**M-161.3**

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DRAWN BY: Author  
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 DATE: 07/08/22  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL

SHEET NO.

### LIGHTING

<p><b>EMERGENCY</b></p>	<p><b>NORMAL</b></p>
-------------------------	----------------------

TRACK: WITH CURRENT LIMITER, WITHOUT CURRENT LIMITER  
 RECESSED DOWNLIGHT: SQUARE, ROUND  
 RECESSED WALLWASHER: SQUARE, ROUND  
 RECESSED ADJUSTABLE ACCENT: SQUARE, ROUND  
 DOWNLIGHT: SURFACE: SQUARE, ROUND  
 WALL WASHER: SURFACE SQUARE, ROUND  
 ADJUSTABLE ACCENT: SURFACE: SQUARE, ROUND  
 ADJUSTABLE ACCENT: MULTILAMP  
 LINEAR: RECESSED  
 LINEAR: RECESSED ASYMMETRIC  
 LINEAR: SURFACE  
 LINEAR: SURFACE ASYMMETRIC  
 LINEAR: SUSPENDED  
 LINEAR: SUSPENDED ASYMMETRIC  
 LINEAR: WALL MOUNTED  
 LINEAR: WALL MOUNTED ASYMMETRIC  
 STRIP LIGHT  
 LINEAR UNDERCABINET  
 LINEAR ACCENT: ARCHITECTURE INTEGRATED  
 PENDANT: SQUARE, ROUND  
 EXIT SIGN: TOP SURFACE OR TOP RECESSED: SINGLE, DOUBLE  
 EXIT SIGN: SIDE OR FLAG MOUNT: SINGLE, DOUBLE  
 EXIT SIGN: BACK SURFACE MOUNT  
 WALL MOUNTED: RECESSED: SQUARE, ROUND  
 WALL MOUNTED: SURFACE: SQUARE, ROUND  
 POLE-MOUNTED: AREA: SQUARE, ROUND  
 POLE-MOUNTED: STREET: RECTANGULAR, OVAL  
 POLE-MOUNTED: PEDESTRIAN: SQUARE, ROUND  
 BOLLARD 360: SQUARE, ROUND  
 BOLLARD 180: SQUARE, ROUND  
 INGRADE SQUARE, ROUND  
 INGRADE ADJUSTABLE SQUARE, ROUND  
 FLOOD LIGHT  
 CONTROL STATION: REFER TO SCHEDULE.  
 WALL SWITCH: 1 POLE, 2 POLE  
 WALL SWITCH: 3 WAY, 4 WAY  
 WALL SWITCH: KEY LOCK, MOMENTARY  
 WALL SWITCH: LOW VOLTAGE, PILOT  
 WALL SWITCH: TIMER, MANUAL DIMMER  
 WALL COMBINATION OCCUPANCY SWITCH, OCCUPANCY DIMMER  
 WALL COMBINATION VACANCY SWITCH, VACANCY DIMMER  
 PHOTOELECTRIC CELL: WALL MOUNTED, CEILING MOUNTED  
 OCCUPANCY SENSOR: CEILING OR WALL MOUNTED  
 VACANCY SENSOR: CEILING OR WALL MOUNTED  
 "X" DESIGNATES DEVICE TYPE:  
 U: ULTRASONIC R: INFRARED DT: DUAL TECHNOLOGY  
 DESIGNATES LUMINAIRE TYPE (SEE LUMINAIRE SCHEDULE)  
 DESIGNATES EMERGENCY FIXTURE  
 DESIGNATES STANDALONE CONTROL ZONE  
 DESIGNATES NETWORK CONTROL ZONE. REFER TO SCHEDULE  
 REFER TO ZONE SCHEDULE FOR CIRCUITING OF NETWORKED LIGHTING.

ELECTRICAL DRAWING LIST	
SHEET #	SHEET NAME
E-101	SYMBOLS, LEGENDS AND ABBREVIATIONS - ELECTRICAL
E-161	OVERALL ROOF PLAN - ELECTRICAL
E-161.1	ENLARGED ROOF PLAN - SECTOR 1 - ELECTRICAL
E-161.2	ENLARGED ROOF PLAN - SECTOR 2 - ELECTRICAL
E-161.3	ENLARGED ROOF PLAN - SECTOR 3 - ELECTRICAL
E-161.4	ENLARGED ROOF PLAN - SECTOR 4 - ELECTRICAL

### POWER - PLANS

<p>WALL RECEPTACLE: DUPLEX, QUADPLEX        SINGLE WALL RECEPTACLE, FACELESS GFCI REMOTE TEST BUTTON        DENOTES GFCI        DENOTES GFCI AND WEATHER PROOF        DENOTES RECEPTACLE ABOVE COUNTER        SPECIAL PURPOSE RECEPTACLE.        CEILING RECEPTACLE: DUPLEX, QUADPLEX        FLUSH FLOORBOX RECEPTACLE. REFER TO SCHEDULE FOR QUANTITY AND TYPES OF DEVICES.        FLUSH POKE-THROUGH RECEPTACLE. REFER TO SCHEDULE FOR QUANTITY AND TYPES OF DEVICES.        DENOTES SPLIT-WIRED, HALF SWITCHED / CONTROLLED VIA MANUAL CONTROL, MOTION CONTROL OR TIME-BASED CONTROL. SEE SPECIFICATIONS &amp; PLANS.        DENOTES FULL SWITCHED / CONTROLLED VIA MANUAL CONTROL, MOTION CONTROL OR TIME-BASED CONTROL. SEE SPECIFICATIONS &amp; PLANS.        SWITCHED / CONTROLLED FLUSH FLOORBOX RECEPTACLE REFER TO SCHEDULE &amp; PLANS FOR CONTROL INFORMATION.        SWITCHED / CONTROLLED FLUSH POKE-THROUGH RECEPTACLE REFER TO SCHEDULE &amp; PLANS FOR CONTROL INFORMATION.        LETTER DESIGNATOR:        E = EMERGENCY IG = ISOLATED GROUND        U = UPS P = SURGE PROTECTIVE DEVICE        S = STANDBY A = AFCI        C = CRITICAL B = WITH USB OUTLETS        DENOTES PANELBOARD AND CIRCUIT NUMBER.        DENOTES CIRCUIT NUMBER. REFER TO SHEET GENERAL NOTES FOR PANELBOARD.        PEDESTAL OUTLET: POWER &amp; SIGNAL COMBINATION        SURFACE OUTLET STRIP. DIMENSION AS SHOWN. SEE SPECIFICATIONS.        POWER POLE, POWER, COMBINATION CIRCUITS AS INDICATED.        JUNCTION BOX        JUNCTION BOX HOME RUN. CIRCUITS AS INDICATED.        JUNCTION BOX HOME RUN &amp; FURNITURE FEED. CIRCUITS AS INDICATED.        CONNECTION TO EQUIPMENT PROVIDED BY OTHERS        PUSH BUTTON STATION: SINGLE, DOUBLE        ELECTRICAL EQUIPMENT        PANELBOARD: SURFACE, RECESSED        ENCLOSURE: SURFACE, RECESSED        TRANSFORMER        GROUND ROD, IN TEST WELL        GROUND PAD</p>	<p>TRANSFORMER</p> <p>SERVICE TRANSFORMER, WITH VAULT</p> <p>GENERATOR, AUTOMATIC TRANSFER SWITCH</p> <p>METER: UTILITY, BASIC, ADVANCED, POWER QUALITY</p> <p>TRANSDUCER: CURRENT, POTENTIAL (VOLTAGE), COMBINED</p> <p>SURGE PROTECTIVE DEVICE, PUSH BUTTON</p> <p>ELECTRICAL BUSWAY, BUSWAY PLUG-IN CIRCUIT BREAKER</p> <p>FEEDER CONTINUATION CALLOUT, FEEDER TAG</p> <p>CALCULATED AVAILABLE SHORT-CIRCUIT CURRENT</p> <p>FEEDER: DROP, RISE, CAP. BREAK, CONTINUATION</p> <p>SWITCH, FUSED SWITCH</p> <p>DISCONNECT, FUSED DISCONNECT</p> <p>MOTOR, MOTOR WITH CONTROLLER, MOTOR WITH STARTER</p> <p>PV ARRAY, INVERTER</p>
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**GENERAL NOTE**

THIS IS A STANDARD LEGEND SHEET, THEREFORE, SOME SYMBOLS MAY APPEAR ON THIS SHEET THAT DO NOT APPEAR ON THE DRAWINGS.

### POWER - SINGLE LINE DIAGRAM & RISER

### FIRE ALARM

	<p>SPRINKLER SYSTEM SWITCH: FLOW, TAMPER        MANUAL FIRE ALARM STATION        DETECTOR: IONIZATION, HEAT, PHOTOELECTRIC        DETECTOR: BEAM        DUCT DETECTOR, TYPE AS NOTED        FIREMANS PHONE JACK        MAGNETIC DOOR HOLDER, CLOSER</p>
--	---

WALL	CEILING	NOTIFICATION DEVICES
		FIRE ALARM: VISUAL
		FIRE ALARM: HORN; HORN W/VISUAL
		FIRE ALARM: SPEAKER; SPEAKER W/VISUAL
		FIRE ALARM: BELL; BELL W/VISUAL
		FIRE ALARM: CHIME; CHIME W/VISUAL

### DEVICE MOUNTING HEIGHTS

**GENERAL NOTES:**

- A. LOCATE ALL FIRE ALARM DEVICES PER CODE.
- B. LOCATE ALL ACCESSIBLE SWITCHES PER ADA GUIDELINES.
- C. FIELD COORDINATE ALL ABOVE COUNTER DEVICES WITH MILL/WORK CONTRACTOR.
- D. IF APPLICABLE, TELECOM CONSULTANTS' DRAWINGS TAKE PRECEDENCE OVER THIS DETAIL FOR TELECOM DEVICES.
- E. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL DEVICES. WHERE NO ELEVATION EXISTS, REFER TO TYPICAL MOUNTING HEIGHTS IN THIS DETAIL.

**NOTES:**

1. TELECOM OUTLET.
2. RECEPTACLE.
3. FIRE ALARM PULL STATION.
4. LIGHT SWITCH.
5. CARD READER.
6. WALL PHONE.
7. ABOVE COUNTER DEVICE. MAINTAIN A CONSISTENT HEIGHT THROUGHOUT SPACE.
8. FIRE ALARM STROBE.
9. OCCUPANCY SENSOR.

### ABBREVIATIONS - ELECTRICAL

<p>AFF ABOVE FINISHED FLOOR        ADA AMERICANS DISABILITIES ACT        A AMPERE (AMP)        AL ALUMINUM        ARCH ARCHITECT / ARCHITECTURAL        ATS AUTOMATIC TRANSFER SWITCH        AWG AMERICAN WIRE GAUGE        C CONDUIT        CAT CATEGORY CABLE        CB CIRCUIT BREAKER        CCTV CLOSED CIRCUIT TELEVISION        CKT CIRCUIT        CLG CEILING        CT CURRENT TRANSFORMER        CU COPPER        DN DOWN        EM EMERGENCY        EMT ELECTRICAL METALLIC TUBING        EP EXPLOSION PROOF        EPO EMERGENCY POWER OFF        EWC ELECTRIC WATER COOLER        FA FIRE ALARM        FLA FULL LOAD AMPS        FLUOR FLUORESCENT        FCIC FURNISHED BY CONTRACTOR        INSTALLED BY CONTRACTOR        FOIC FURNISHED BY OWNER        INSTALLED BY CONTRACTOR        FOIO FURNISHED BY OWNER        INSTALLED BY OWNER        GEN GENERATOR        GFP GROUND FAULT PROTECTION        GFI GROUND FAULT INDICATOR        GFCI GROUND FAULT CIRCUIT INTERRUPTER        GRC GALVANIZED RIGID CONDUIT        GRD GROUND        HP HORSEPOWER        HPS HIGH PRESSURE SODIUM        HV HIGH VOLTAGE        HZ HERTZ        IG ISOLATED GROUND        INC INCANDESCENT        INV INVERTER        JB JUNCTION BOX        KW KILOWATT        KWH KILOWATT HOUR        KV KILOVOLT        KVA KILOVOLT-AMPERE</p>	<p>KVAR KILOVOLT-AMPERE REACTIVE        LA LIGHTNING ARRESTOR        LED LIGHT EMITTING DIODE        LRC LIGHTING RELAY CONTROL PANEL        LTG LIGHTING        LV LOW VOLTAGE        MATV MASTER ANTENNA TELEVISION        MAX MAXIMUM        MCA MINIMUM CIRCUIT AMPACITY        MCB MAIN CIRCUIT BREAKER        MCC MOTOR CONTROL CENTER        MDP MAIN DISTRIBUTION PANEL        MECH MECHANICAL        MH METAL HALIDE        MIN MINIMUM        MLO MAIN LUGS ONLY        MOCP MAXIMUM OVERCURRENT PROTECTION        MTS MANUAL TRANSFER SWITCH        MV MEDIUM VOLTAGE        NIC NOT IN CONTRACT        NL NIGHT LIGHT CIRCUIT        PA PUBLIC ADDRESS        PDZ PRIMARY DAYLIGHT ZONE        PE PHOTOELECTRIC CELL        PF POWER FACTOR        PNL PANELBOARD        PVC POLYVINYL CHLORIDE        PWR POWER        SDP SUB-DISTRIBUTION PANEL        SDZ SECONDARY DAYLIGHT ZONE        STR STARTER        SV SOLENOID VALVE        SW SWITCH        TD TIME DELAY        TP TAMPERPROOF        TTB TELEPHONE TERMINAL BOARD        TTC TELEPHONE TERMINAL CABINET        TV TELEVISION        TYP TYPICAL        UG UNDERGROUND        UPS UNINTERRUPTIBLE POWER SUPPLY        V VOLTAGE        VA VOLT-AMPERE        VFD VARIABLE FREQUENCY DRIVE        VP VAPORPROOF        W WATTS        WP WEATHERPROOF        XFMR TRANSFORMER</p>
---	---

### ELECTRICAL EQUIPMENT DESIGNATION

**POWER TYPE:**  
 BLANK - NORMAL POWER  
 E - EMERGENCY POWER  
 U - UNINTERRUPTIBLE POWER

**VOLTAGE:**  
 2 - 208Y/120V  
 4 - 480Y/277V  
 5 - 4180Y/2400V  
 15 - 12470Y/7200V

**EQUIPMENT:**  
 D - MAIN DISTRIBUTION PANEL  
 S - SUB DISTRIBUTION PANEL  
 B - BUSWAY  
 M - MOTOR CONTROL CENTER  
 A - AUTOMATIC TRANSFER SWITCH  
 P - POWER PANEL  
 L - LIGHTING PANEL  
 T - TRANSFORMER  
 U - UPS  
 LRC - LIGHTING RELAY CONTROL PANEL

**BUILDING LEVEL:**  
 0 - BASEMENT  
 1 - FIRST LEVEL  
 2 - SECOND LEVEL  
 3 - THIRD LEVEL  
 4 - FOURTH LEVEL  
 ETC.

**GRID LOCATION:**  
 1A - NEAR INTERSECTION OF GRID LINES 1 AND A

**IDENTIFIER:**  
 A - FIRST IN SERIES OF EQUIPMENT  
 B - SECOND IN SERIES OF EQUIPMENT  
 ETC.

### DESIGNATION SYMBOLS

	EQUIPMENT DESIGNATOR SEE SCHEDULE.	
	EXISTING TO REMAIN, EXISTING TO BE REMOVED	
	EXISTING TO BE RELOCATED, FUTURE	
	NEW, CONNECT TO	
	NOTE	

**GENERAL NOTES:**  
 A. ALL WORK SHOWN ON ENLARGED PLANS.



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**ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS**  
 BEAVERTON SCHOOL DISTRICT  
 MCKINLEY ELEMENTARY SCHOOL  
 1500 NW 185TH AVE.  
 BEAVERTON, OR 97006

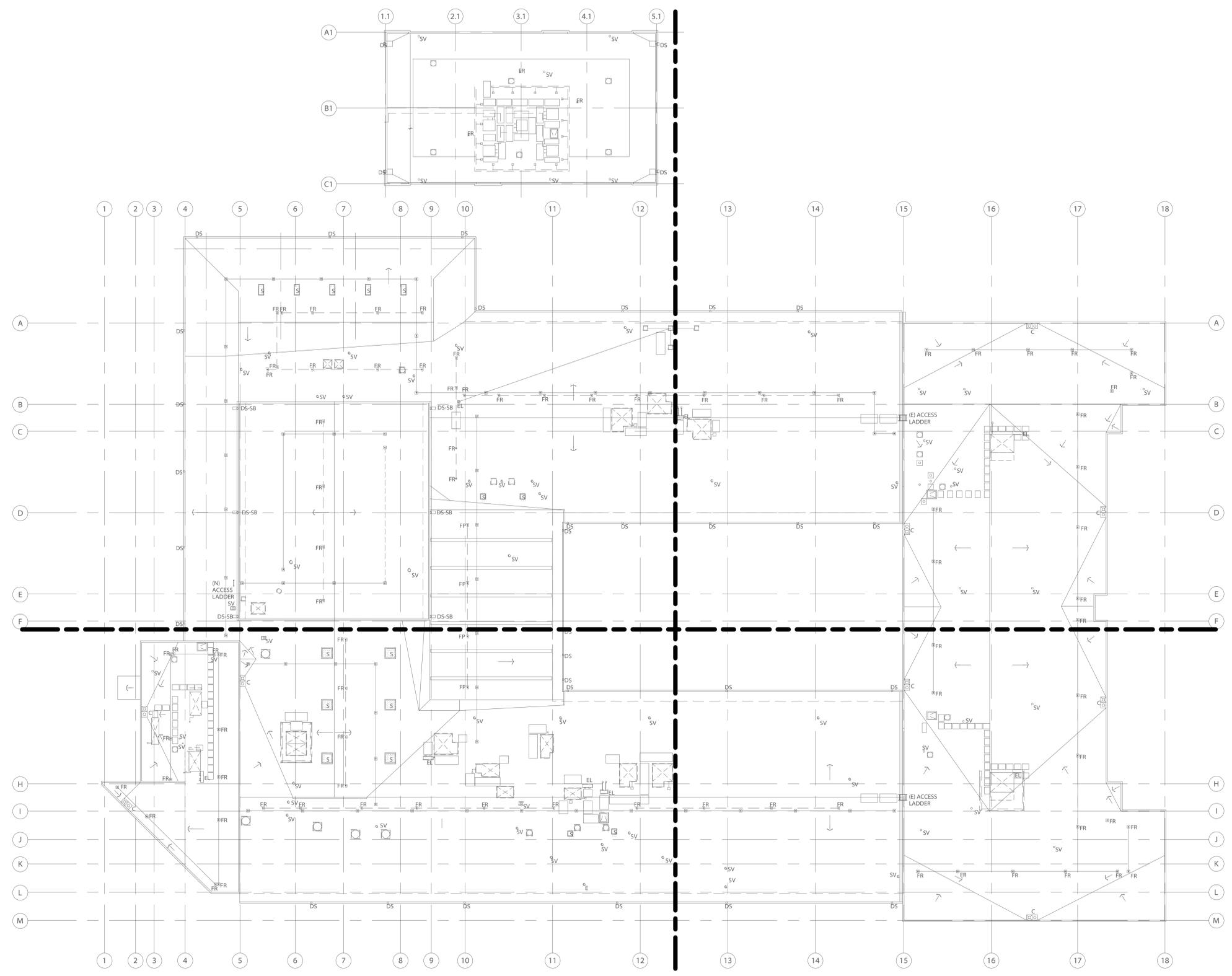


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No.	Description	Date

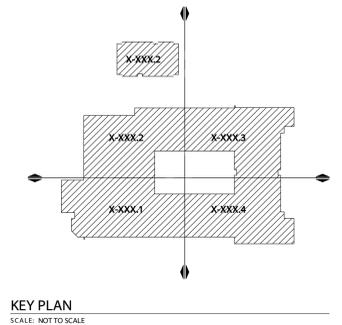
DRAWN BY: Author  
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 JOB NO: 22-002 BSD MKES  
 DATE: 07/08/22  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 OVERALL ROOF PLAN - ELECTRICAL

SHEET NO.

E-161



**1** OVERALL ROOF PLAN - ELECTRICAL  
 1/16" = 1'-0"



KEY PLAN  
 SCALE: NOT TO SCALE

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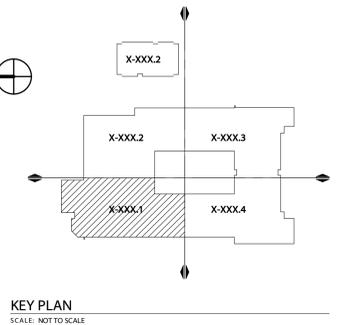
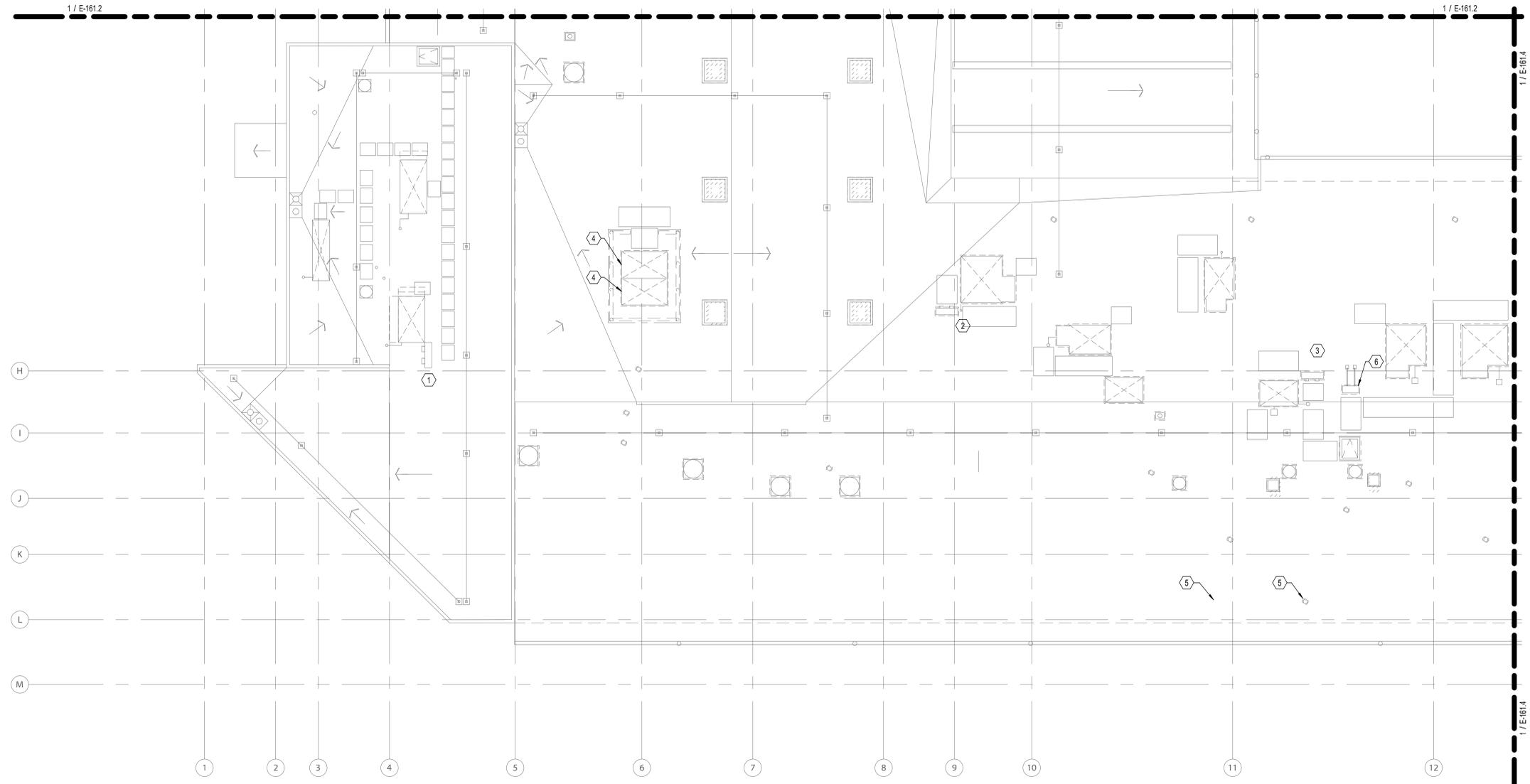
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 DATE: 07/08/22  
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SHEET TITLE  
 ENLARGED ROOF PLAN -  
 SECTOR 1 - ELECTRICAL

SHEET NO.

- GENERAL NOTES:**
- CONTRACTOR TO PROVIDE SEISMIC BRACING PER ASCE 7 CHAPTER 13 FOR EQUIPMENT AND CONNECTIONS INDICATED ON THESE DRAWINGS.
  - CONTRACTOR TO REFER TO ASCE 7 CHAPTER 13 FOR ADDITIONAL ELECTRICAL SYSTEMS BRACING CRITERIA.

- NOTES:**
- BRACE ELECTRICAL CABINET ADJACENT TO RTU-3 TO PREVENT CABINET OVERTURN DURING SEISMIC EVENT.
  - BRACE ELECTRICAL CABINET ADJACENT TO RTU-1 TO PREVENT CABINET OVERTURN DURING SEISMIC EVENT.
  - BRACE ELECTRICAL CABINET ADJACENT TO RTU-9 TO PREVENT CABINET OVERTURN DURING SEISMIC EVENT.
  - CONTRACTOR TO DISCONNECT EXISTING ELECTRICAL CONNECTION TO A/C UNIT TO ALLOW FOR ADDED ROOF INSULATION. SPLICE TO EXISTING AND EXTEND NEW BRANCH CIRCUIT (MATCH EXISTING FEEDER SIZE) TO FINAL LOCATION OF RELOCATED A/C UNIT.
  - CONTRACTOR TO VERIFY EXISTING WEATHERHEAD/ELECTRICAL CONDUIT IS NO LONGER IN USE. REMOVE WEATHERHEAD AND CUT AND CAP EXISTING CONDUIT TO BELOW ROOF STRUCTURE. REMOVE EXISTING CABLING WITHIN CONDUITS BACK TO SOURCE.
  - ELECTRICAL PANEL WILL BE RAISED FROM EXISTING LOCATION TO ACCOMMODATE ADDED ROOF INSULATION. CONTRACTOR TO CUT FEED AT EXISTING ROOF LINE, AND SPLICE AND EXTEND NEW AS REQUIRED TO ACCOMMODATE PANEL'S FINAL LOCATION. MAINTAIN EXISTING BRANCH CIRCUITS SERVED FROM PANEL AND SPLICE/EXTEND NEW AS REQUIRED TO EXISTING EQUIPMENT AS REQUIRED.



1 ENLARGED ROOF PLAN - SECTOR 1 - ELECTRICAL  
 1/8" = 1'-0"

KEY PLAN  
 SCALE: NOT TO SCALE



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ROOFING REPLACEMENT WITH ROOF-LEVEL SEISMIC IMPROVEMENTS  
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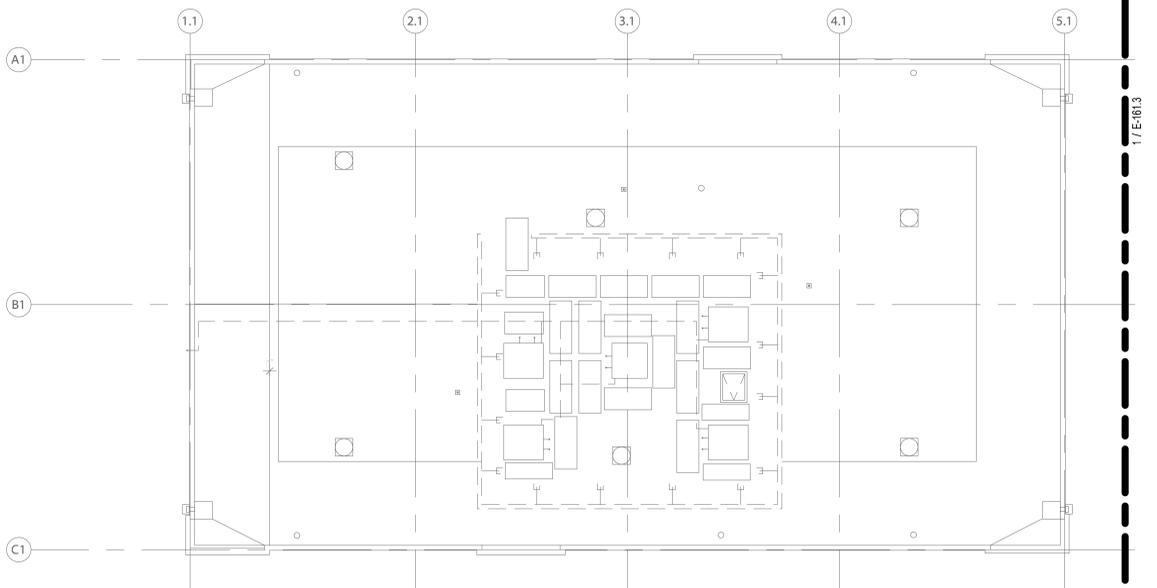
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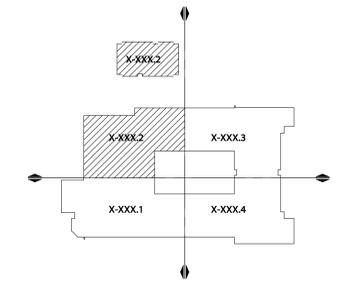
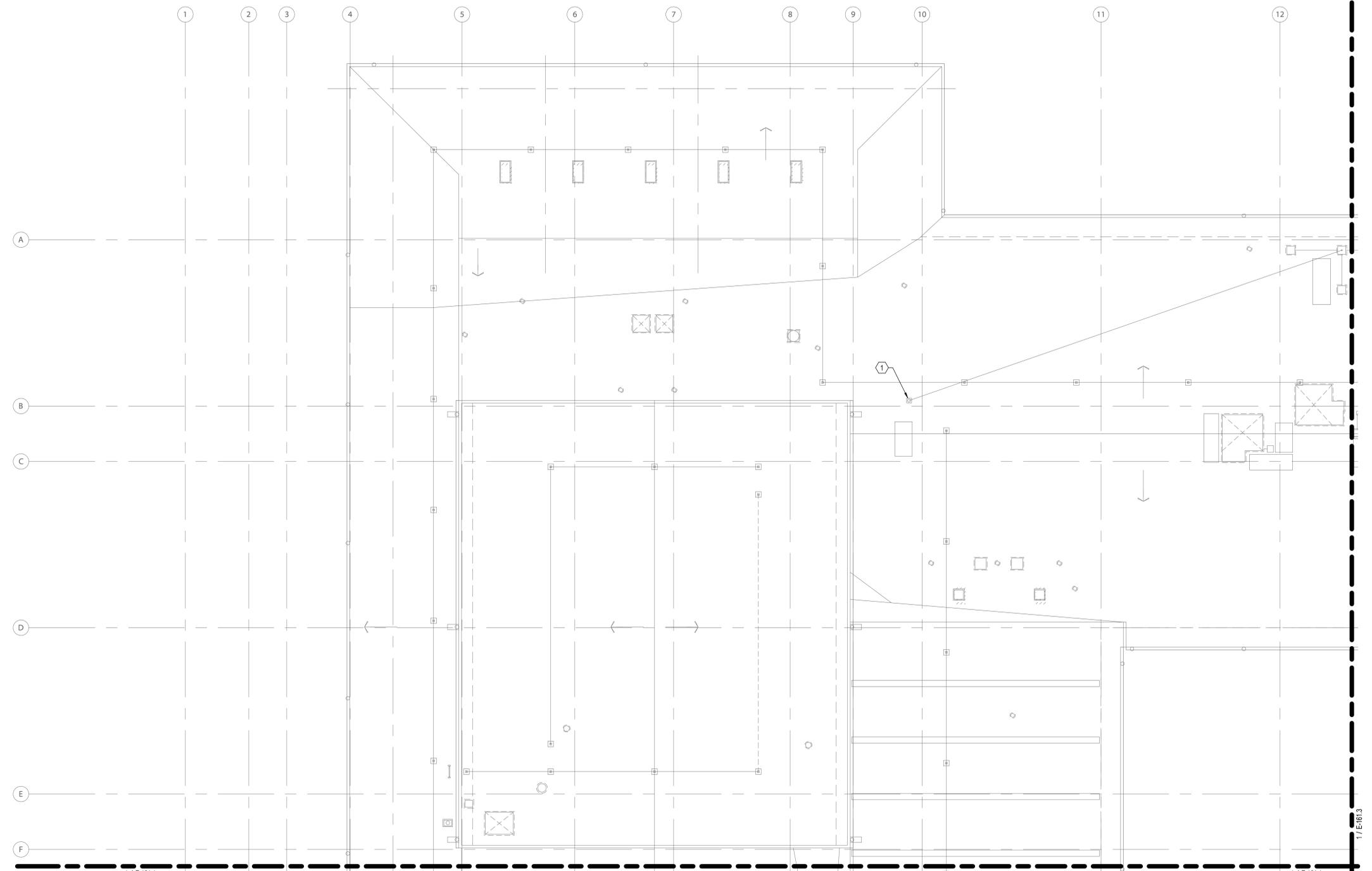
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SHEET TITLE  
ENLARGED ROOF PLAN -  
SECTOR 2 - ELECTRICAL

SHEET NO.

E-161.2



- NOTES:**
1. DEMOLISH EXISTING ROOF CONDUIT PENETRATION AND PROVIDE NEW TO ACCOMMODATE ADDED ROOF INSULATION AT THIS LOCATION. MATCH EXISTING SIZE AND QUANTITY.

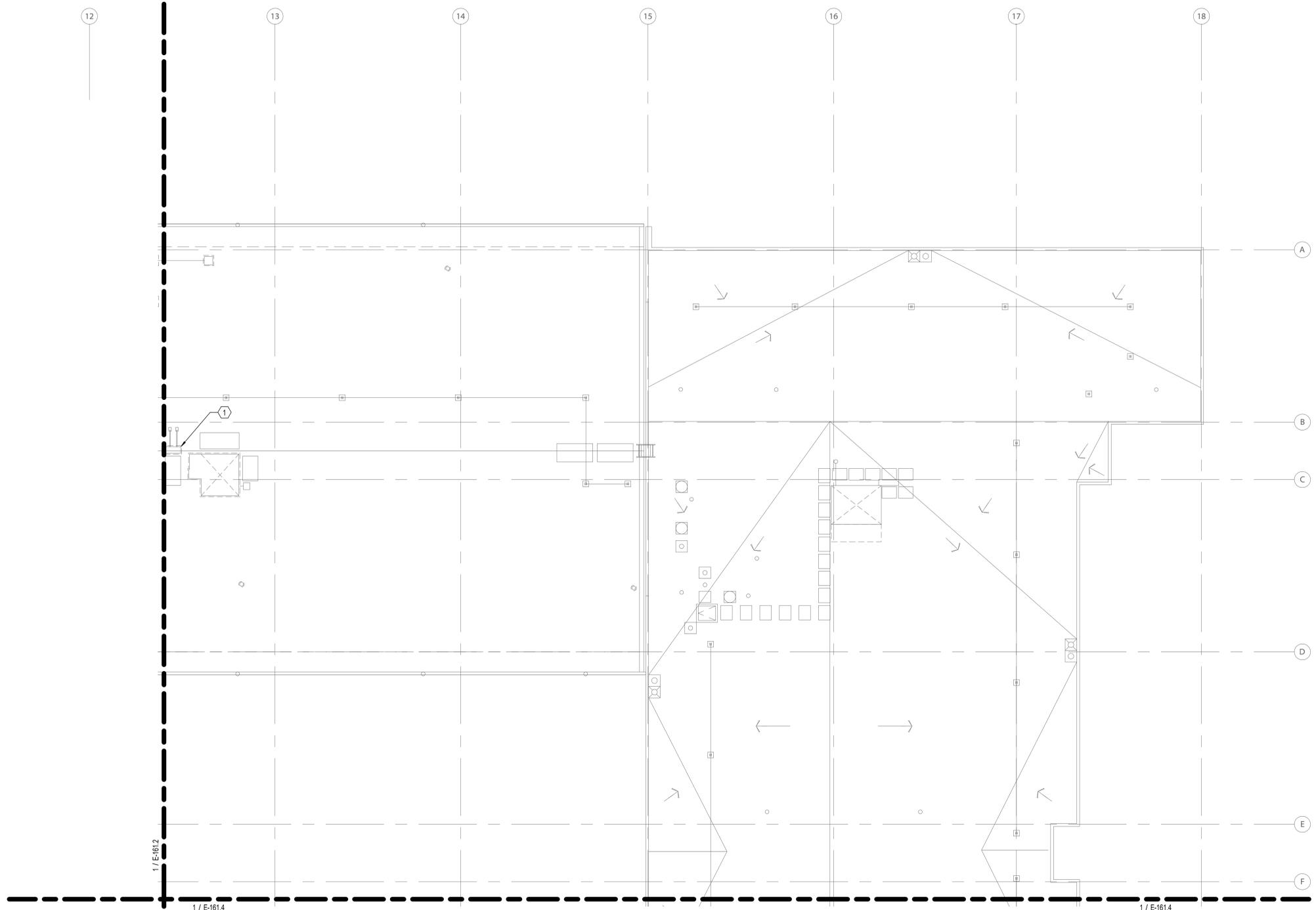
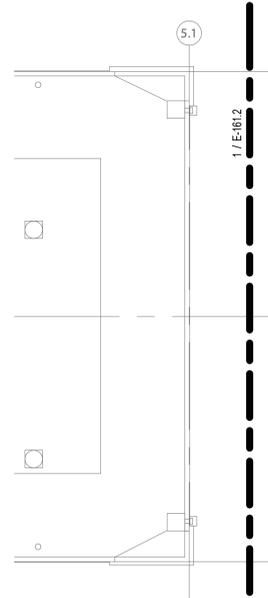


KEY PLAN  
SCALE: NOT TO SCALE

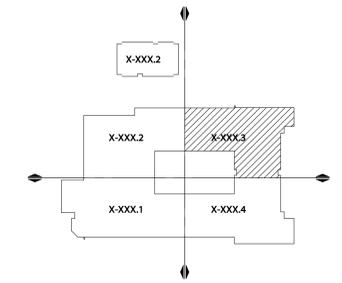
1 ENLARGED ROOF PLAN - SECTOR 2 - ELECTRICAL  
1/8" = 1'-0"

Plot Date: May 23 22 © Time: 2:09 PM

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- NOTES:**
- ELECTRICAL PANEL WILL BE RAISED FROM EXISTING LOCATION TO ACCOMMODATE ADDED ROOF INSULATION. CONTRACTOR TO CUT FEED AT EXISTING ROOF LINE, AND SPLICE AND EXTEND NEW AS REQUIRED TO ACCOMMODATE PANEL'S FINAL LOCATION. MAINTAIN EXISTING BRANCH CIRCUITS SERVED FROM PANEL AND SPLICE/EXTEND NEW AS REQUIRED TO EXISTING EQUIPMENT AS REQUIRED.



1 / E-161.4  
 1 ENLARGED ROOF PLAN - SECTOR 3 - ELECTRICAL  
 1/8" = 1'-0"



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 ENLARGED ROOF PLAN - SECTOR 3 - ELECTRICAL

SHEET NO.

E-161.3

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**GENERAL NOTES:**  
 A. NO WORK IN THIS AREA OF THE BUILDING.

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 BEAVERTON, OR 97006



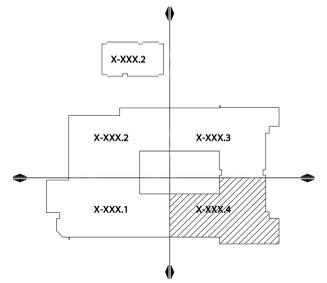
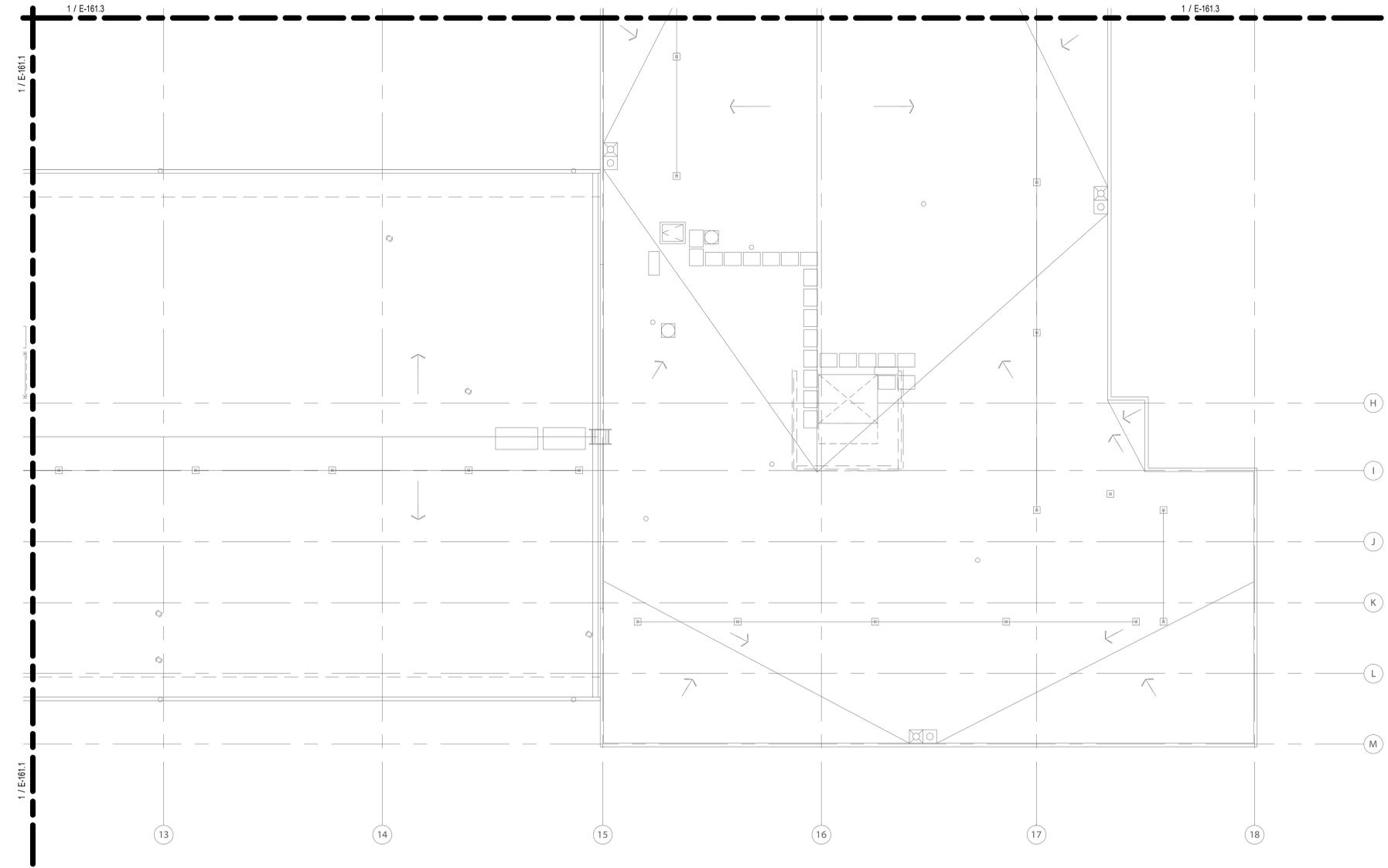
REVISIONS

No.	Description	Date

DRAWN BY: Author  
 CHECKED BY: Checker  
 JOB NO: 22-002 BSD MKES  
 DATE: 07/08/22  
 ISSUED FOR: BID | PERMIT  
 SHEET TITLE  
 ENLARGED ROOF PLAN -  
 SECTOR 4 - ELECTRICAL

SHEET NO.

**E-161.4**



**KEY PLAN**  
 SCALE: NOT TO SCALE

**1 ENLARGED ROOF PLAN - SECTOR 4 - ELECTRICAL**  
 1/8" = 1'-0"

P:\2022\22-002 BSD McKinley ES - Seismic Upgrades\01 Production\01 Revit\02 Linked CAD\11-002\_BSD\_MKES\_30x42 TB\_Seismic\_ROOF.rvt © Plot Date: May 23 22 © Time: 2:09 PM